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TWO LINE *Editorials*

An official of the U. S. Golf Association says there should be "strict integrity" in all golf games. What! You mean we gotta count all our strokes?

* * *

The Russians report that their aviation scientists have discovered how to fly "to the farthest star." Unfortunately, however, they probably won't do it.

* * *

A current British labor dispute results from a charge that one man was working too hard. This is a source of trouble we seldom have in our country.

* * *

Those people who suggest giving the country back to the Indians don't seem to realize that the Indians might be too smart to take it back.

* * *

A farm paper editor complains that nothing is being done for the farmers who raise chickens. That's strange, when we have so many egg-heads in Washington.

* * *

California astronomers announce the discovery that the universe is not expanding as rapidly as it once was. Maybe deflation has set in at last.

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Washington Report

August 3, 1956

THE Government apparently intends to continue bolstering lead and zinc markets by acquiring for its stockpiles supplies of both metals produced in this country and abroad. Foreign metals already acquired in exchange for U. S. surplus farm products are estimated to be 100,000 tons of zinc and 35,000 tons of lead.

After a remarkably short digestive period, it appeared the Government was ready to re-enter the market for the purchase of more foreign lead and zinc through barter or exchange of surplus domestic agricultural items. The metals so acquired will be placed in the supplemental stockpile that was established under the Agricultural Trade Development and Assistance Act. Two new restrictions are expected to be imposed on the forthcoming barter deals:

1. The metals must not only be mined abroad but also smelted and refined abroad;

2. The metals acquired by the Barter and Stockpiling Division of the Commodity Credit Corporation (which handles the barter program) must be delivered promptly, probably within 30 to 60 days from the date of commitment.

When the U. S. Government made its barter acquisitions during early June, it accepted lead and zinc that were mined abroad and either smelter and refined abroad or in the U. S. The time of delivery was extended to the end of 1956.

Some trade quarters doubted that the CCC, under the new restrictions which limit the acquisitions to metal that is mined, smelted and refined abroad, will be swamped with offers, especially since at this writing prices on the London Metal Exchange for lead and zinc are slightly above the domestic parity. One of the underlying principles of these barter deals is that the price must not be higher than the domestic quotation and the import duty and the delivery cost are for the seller's account.

Domestic Acquisitions

The General Services Administration, which does the Government's buying of domestic metals for the long-term stockpile, is reported to have purchased a little over 10,000 tons of lead in June with the offers exceeding this total. In June the GSA bought a little over 15,000 tons of zinc for the stockpile.

In well informed quarters the opinion prevalied that if the GSA limits its monthly purchases to 15,000 tons of zinc and 10,000 tons of lead, it may be able to stretch them out almost to the end of this year.

Beryl, Manganese Buying

The GSA also announced extension of the purchase programs for three other domestic minerals; mica, beryl and manganese. The mica program, which was scheduled to end June 30, 1957, was extended until June, 1962, wtih the goal remaining at 25,000 tons. The same new extension was applied to beryl, except that it may be ended earlier if a new purchase ceiling of 4,500 dry tons is reached; the old goal was 1,500 tons.

The program for manganese obtained from small producers was extended from June 30, 1958, to January 1, 1961. The purchase ceiling was raised from 19,000,000 long ton units to 28,000,000.

Copper Export Curbs

Relaxation of special licensing requirements for export of certain copper raw materials in the third quarter of this year was announced July 19 by the U. S. Bureau of Foreign Commerce. Under this relaxation, exporters are no longer required to submit evidence of availability in support of applications to export refined copper and copper ores, concentrates, matte, and other unrefined copper.

In addition, applications to export offshore scrap copper will not be charged against the third-quarter quota established for such exports, if the material originated in a U. S. territory or possession outside the Continental United States and was collected under an approved collection contract with a U. S. Government agency.

The BFC said that applications to export certain aluminum and copper scrap material must be submitted before September 15 in order to be considered for third-quarter licensing.

Import Duty Laws

President Eisenhower signed into law HR 8228, continuing through July 16, 1958, duty-free imports of bauxite, and HR 10269 suspending for two years import duties on aluminum. The President also approved HR 8636 continuing duty-free imports of most scrap metals until June 30, 1957.

According to Public Law 723 (HR 8636): "This Act shall not apply to lead scrap, lead alloy scrap, antimonial lead scrap, scrap battery lead or plates, zinc scrap, or zinc alloy scrap, or to any form of tungsten scrap, tungsten carbide scrap, or tungsten alloy scrap; or to articles of lead, lead alloy, antimonial lead, zinc, or zinc alloy, or to articles of tungsten, tungsten carbide, or tungsten alloy, imported for remanufacture by melting." In other words, duties or import taxes apply to all the materials mentioned above.

U. S. Aids Nickel Output

The Government announced it will pay premium prices to encourage expansion of nickel production. In addition to fast tax amortization and market price purchase contracts to encourage nickel production expansion, the Government's new step would give either domestic or foreign producers further financial help in developing nickel by paying premium prices for the metal to cover production costs.

The current supply of nickel available to the U. S. is around 300,000,000 pounds a year. By 1961, the Government hopes to have 440,000,000 pounds a year available. Most of the metal comes from Canada, with Cuba next largest source, with only about 15,000,000 or 16,000,000 pounds produced in the U. S.

Nickel Processing Corp., a subsidiary of National Lead Co., announced the completion of another record-breaking year in the operation of the U. S. Government — owned nickel plant in Nicaro, Cuba. The plant produced 31,460,000,000 pounds of nickel in the 12 months ending June 30, topping the previous fiscal year production of 29,504,000 pounds by 1,956,000 pounds and surpassing the plant's rated capacity.

Metal, Steel Allotments

Copper, aluminum and steel allotments for "A" products of the fourth quarter of 1956 were announced July 19 by the Office of Defense Mobilization.

Fourth quarter copper allotments are 2.6 per cent lower than for the third quarter of this year; aluminum allotments are 3.2 per cent higher, and steel allotments are 2.4 per cent higher. Allotments for nickel alloys, which were made under the Defense Materials System for the first time, were set at 23,850,000 pounds.

Mineral Reasearch Plans

Congressional appropriations for the Bureau of Mines for the fiscal year 1957 will enable it to intensify nationwide reasearch in metals and non-metals essential to defense and industrial progress, as recommended by the President's Advisory Committee on Mineral Policy, according to Secretary of the Interior Fred A. Seaton.

Funds totaling slightly more than $22,000,000 were made available to the Bureau for conducting field studies and for maintaining experiment stations and laboratories in 27 States and Alaska. The money does not include an $8,500,000 allotment voted by Congress last year, which is earmarked for the Government's share of the $17,000,000 anthracite mine-drainage program in Pennsylvania,

(Continued on page 13)

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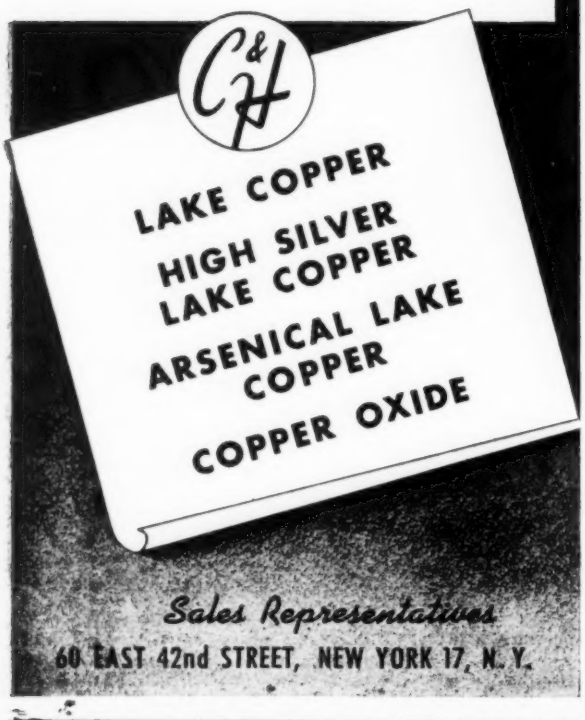

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DEVELOPMENT OF ADDITIONAL SOURCES OF NICKEL ESSENTIAL TO MEET EXPECTED GROWTH IN DEMAND

Long-Range Outlook Is for Heavy Expansion of Industrial Needs Over Next 25 Years and Rise in Military Use; Defense Stockpile Necessary

By JOHN R. TOWNSEND, Director, Materials & Standards Engineering, Sandia Corp.

THE AUTHOR

Mr. Townsend, who is chairman of the Materials Advisory Board of the National Academy of Sciences, prepared an analysis of the nickel situation at the request of Dr. Arthur S. Flemming, Director of the Office of Defense Mobilization.

His report was submitted to Dr. Flemming on February 3, 1956, and made available to the press on July 31, 1956. Within security limitation the report as published in METALS summarizes the major points made by Mr. Townsend and includes the more important of his conclusions.

1. Conservation

Citing examples in various nickel consumption fields, the report shows that much work has been done in conserving nickel through use of improved techniques and better equipment, substitution, and efficient utilization. It was noted that such savings are reaching the point of diminishing returns in relation to maintenance of quality and in any case are more than offset by proliferation in the uses of nickel and increased demand for nickel bearing products. In short, conservation in itself will not provide a solution to the current shortage of nickel.

2. Development of Supply

An abundant supply of nickel in time of war is essential. Assurance of an increased supply can only be obtained by development of low grade nickel deposits adjacent to the United States. Technical research on extraction processes, already completed or under way indicates that this is feasible.

The advantage of having available "know-how" based on sound research or plants making use of such processes which are already in operation and capable of expansion would in the event of war buy time. Furthermore, the dispersion of facilities made possible by such "know-how" may prove more valuable than a large stockpile of static material.

3. Nickel Deposits

Nickel sulphides in Canada, nickel laterites in Cuba, and nickel arsenides, complex sulphides and silicates in the U. S. are of particular importance to industry and the nation because of easy accessibility. These ores represent perhaps 29 million tons of contained nickel which may be more than half of the free world reserves as currently estimated. A brief review of these reserves follows:

a. Sulphide Ores

With the exception of relatively small amounts in the Union of South Africa and the United States (including Alaska) and perhaps unknown quantities in the USSR, sulphide ores are if found only in Canada.

The International Nickel Company with half a century's experience with sulphide ores has developed recovery processes to a highly efficient degree. The Company's reserves represent by far the greatest portion of Canada's potential supply and would last for many years at the present rate of production. Furthermore, more reserves are being found at present than are being utilized. The Company's large Moak Lake deposit is now being explored and may result in a substantial increase in its reserves.

The other two important producers in Canada, the Falconbridge Nickel Mines, Ltd. and Sheritt Gordon Mines, Ltd. also operate on sulphide ores but their reserves are relatively smaller and would suffice for a shorter period of time.

b. Laterite Ores

Estimates of the nickel content of Cuban laterite ore reserves approximate 24 million tons equal to 2 centuries consumption by the U. S. at the current rate of usage. Laterite ores containing huge amounts of nickel are also found in the less accessible Philippines, the Celebes and New Caledonia. The United States Government has sponsored at Nicaro, Cuba the production of nickel (using the Caron process) from a serpentine-laterite ore mixture which contains about 1.10% to 1.25% nickel with about .10% cobalt. This plant is producing 30 million pounds of nickel in nickel oxide per year and with the expansion under way will have an output of 50 million pounds per year by early 1957. No cobalt is being recovered separately but Battelle Institute and Bureau of Mines are seeking methods to increase the nickel recovery and separate economically marketable cobalt.

The Freeport Sulphur Company is developing through a pilot plant stage a sulphuric acid leach process for its laterite ores in Moa Bay. The Company plans to leach ores in Cuba and refine the concentrates in this country. It is believed that processing and production problems will be solved in the near future. However, full scale production could not commence until 1959.

The Bethlehem Steel Company's Mayari laterite ore is the largest single reserve and is susceptible to either an acid leach or an ammonium carbonate leach process. The latter has been carefully tested and experts believe it may prove to be an economical method for the recovery of nickel and cobalt. Furthermore, a good iron ore can be obtained from the tailings by removal of the contained chromium. Production of 10 million pounds of nickel oxide in 1958 and 20 million pounds in 1959 may be feasible.

c. Arisenides, Complex Sulphides and Silicates

The United States nickel ores consists of arsenides, complex sulphides and silictaes which are limited and difficult to process. Under a Government contract a National Lead Company is attempting to recover nickel and cobalt from a complex sulphide ore at Fredericktown, Mo. The problem is a difficult one because of the need for a ten way separation to recover the nickel. However, the relatively small production which may be forthcoming may not be an important factor in the nickel situation.

A silicate deposit in Riddle, Oregon is being developed by a M. A. Hanna Company subsidiary. Production of

ferro-nickel will rise to 17 million pounds of contained nickel per year. However, the deposit represents a small reserve.

d. Comment

Where United States production is of minor character and Canadian production inadequate for all needs, it would appear that in the long view the United States would have to look more and more to Cuba as a source for nickel. The adequacy of the ore deposits, the ease of surface mining and the logistical advantage over production in the Philippines, Celebes, and New Caledonia, would support this view and once plants are established they would be readily capable of expansion. Since most nickel is used in association with cobalt, chromium, and iron, Cuban ores are particularly significant in containing all these elements.

4. U. S. Consumption of Nickel

Against an estimated free world production in 1956 of 440 million pounds, the United States will receive about 300 million pounds. After giving effect to current defense requirements and deliveries to the stockpile as limited by diversions to industry, availability of nickel for industrial purposes may be 30 million pounds short of demand in 1956 according to recent estimates. With the demand continuing to grow, development of additional sources of supplies would appear to be essential if this situation is to be eased over the near future.

5. Long Range Outlook for the Nickel Industry

Factors pointing to an increasing demand for nickel-containing products over the future include the following:

a. The heavy expansion of industrial needs over the next 25 years, as predicted by the Paley Report;

b. Accelerated population growth;

c. Potential increase in military usage — current estimates of requirements do not reflect developments in prospect for weapons using larger quantities of nickel.

d. Broader use of nickel — as applications of nickel are widened, one development builds on another and new and more effective ways of using nickel are constantly being found.

It is argued that it is essential to the health, growth, and development of both industrial and defense consumers of nickel that they be kept well supplied with nickel. This can be accomplished by reason of the adequacy of nickel in the earth's crust adjacent to the United States. This places an accent on the development and utilization of efficient extractive methods for the available types of ores.

6. Strategic Considerations

Current production of nickel is limited to a small number of producers. The development of additional sources of supply not only would ease the problem of the current shortage and a potential deficit in time of war but would provide the advantage of dispersion of facilities.

7. Strategic Planning

During a mobilization period substantial quantites of nickel would be needed not only for war production but reconstruction purposes. Thus, it is clearly in the national interest to accumulate an adequate stockpile of nickel. We, therefore, should accumulate such a stockpile aggressively until we achieve a minimum reserve consistent with the national security. As new sources are developed, however, and the basis of production enlarge, the stockpile requirement could be reduced as required by overall needs.

Conclusions

In light of the above, the conclusions can be summarized as follows:

Nickel, widely used in metallic alloys, is a critical material for which domestic supply is wholly inadequate. Conservation of itself cannot bring supply and demand together and in any case reduction in specific use is limited while proliferation of new uses would more than offset such savings. There are, however, entirely sufficient reserves which are reasonable accessible and capable of develop-

(Continued on page 13)

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LEAD INDUSTRY SHOULD SEEK NEW USES TO EXPAND OUTPUT AND OFFSET LOSSES IN EXISTING MARKETS

Future Seems Assured in Automotive Industry Which, Including Gasoline, Now Accounts for About One-Half of Annual Consumption of Metal in U.S.

By JOHN M. CAMPBELL, General Motors Research Staff

IT is a pleasure to speak to you about the outlook for lead in the automobile industry. Lead plays an important part in the manufacture of the automobile. Lead is used in storage batteries, in gasoline, in solder, in bearings, in differential gear oil, in corrosion-resistant steel coatings and in wheel balancing weights. There are about eleven pounds of lead used in each car exclusive of the lead used in the battery and electrical system. In these applications lead has become almost indispensable. I say almost indispensable because nothing is absolutely indispensable. We could get along without lead but it would cost us more and it would cost the consumer more. You are well aware that the success of the automobile industry has been built upon the production of maximum valves in the product at minimum cost to the consumer.

Lead has some unique chemical properties that have been very useful to the automotive industry and at the same time it does these things cheaper than anything else we know of. That is a hard combination to beat but we must remember that there is always the economic competition for the automotive market. Right now, for example, copper and nickel are pricing themselves out of our market and although we haven't yet found satisfactory substitutes for them, a great deal of research and development is aimed in that direction.

Address delivered at 28th annual meeting, Lead Industries Association, April 24-25, St. Louis, Mo.

I like to think of your industry along with the steel, rubber, petroleum and glass industries and mine as a group of great American industries in partnership to produce the greatest transportation system in the world. Today there are over 60 million registered passenger cars, trucks and buses on the American highways — enough to carry our entire population and have room to spare. We are crowded, to be sure, and we need more and better highways. We need them badly to satisfy the wants of the American people for a better life and I am sure we are going to get them.

Lead in Automotive Transportation

The statistics of the past 15 years show that total lead consumption for all uses in this country has been around one million tons annually with a 10 to 15 per cent variation from year to year but with no trend up or down indicated.

During this same period automobile, truck and bus registrations have risen from about 30 million to 60 million. This increase in automotive vehicle population has been accompanied by a significant increase in lead consumed by the automotive industry.

	tons 1940	tons 1955
Storage batteries, incl. original and replacement	220,000	380,000
Tetraethyllead in gasoline	49,000	165,000
Solder, body and radiator electrical	6,000	21,000
Total	**275,000**	**566,000**

These figures indicate that automotive uses, including gasoline, now account for about one-half of the annual consumption of lead in this country. At the same time, the increases in consumption in the automotive industry have just about offset decreases in other uses of lead in other industries to keep total domestic consumption about the same over the past 15 years.

When I became aware of these figures my first thought was that the Lead Industries Association should award a medal to Charles F. Kettering for his services to the lead industry. First, because of his successful introduction of the battery ignition and self-starter and second for his part in the discovery and commercial development of tetraethyllead as an ingredient in gasoline to prevent knock.

Of course, the real beneficiary of these inventions and developments has been the motoring public who get the benefit of them with every mile they drive in terms of added conveniences and economics in the cost of transportation.

What is the Outlook?

Last year was a year of record production in the automotive industry. Nine million, 643,000 cars and trucks were produced in the United States and Canada.

We expect production for 1956 to be somewhat less than last year. Mr. H. H. Curtice, president of General Motors, has predicted unit production of 8,350,000 cars and trucks for the

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As far as your business is concerned, you are in a fortunate position because your largest market, namely the storage battery and gasoline market, is in the use of the automobile rather than in its manufacture. This is a stable and ever-expanding market. Total passenger car and commercial vehicle registrations have now reached 60 million units and by 1962 we except this number to increase to 75 million.

As a result of engineering improvements that have been made in the automobile and the highways of today, the average life of an automobile has been increased from 6.5 years in 1925 to 14 years for the modern automobile. This increase in the useful life of the car coupled with increased car registrations is bound to have a favorable influence on your replacement battery business and your gasoline account.

You heard a very excellent report on the outlook for lead in storage batteries by Mr. B. B. Steiner, president of the Association of American Battery Manufacturers so it would be needless for me to dwell further on this subject except to confirm Mr. Steiner's conclusion that the long-term outlook for lead in storage batteries is good. The adoption of 12-volt systems and the increasing electrical loads mean increasing use of lead both in original equipment and in replacement batteries.

Expanding Lead Use in Gasoline

Coupled with the doubling of passenger car and truck registrations since 1940 has been an increase of lead consumption in gasoline from 49,000 tons in 1940 to 165,000 tons in 1955. This increase reflects not only the increase in registrations but also increased usage of the automobile and increased concentrations of tetraethyl lead in both regular and premium gasolines.

During the past ten years there has been an accelerated development both in fuels and in engines. Octane number of premium gasoline has risen from 86 in 1946 to an average of 96 at the present time. This increase in octane numbers has been made possible in large measure by the development of new processes in the petroleum industry, namely, catalytic cracking and catalytic reforming together with an increase in average lead content from 1.1 in 1946 to 2.4 in 1956.

At the same time, compression ratios in automobile engines have increased from 6.55:1 in 1946 to 8.8:1 in 1956 with some as high as 10:1.

To understand the full significance of this trend it must be recognized that engine efficiencies have increased during this period by about 20 per cent. Thus although we are producing more horsepower and getting better performance, we are doing it with approximately 20 per cent less gasoline than would have been required if these changes had not been made.

The total price paid for gasoline by the consumer last year was about 15 billion dollars. This might be compared with about one billion paid by all the public utilities in the United States for fuel in the same year. Assuming that lead was responsible for about one-third of the improvement in octane number, it can be estimated that the annual saving due to lead since 1946 has been about a billion dollars for an original investment in 50 million dollars worth of lead — an annual return of 20:1.

In view of its important economic position, I think that the use of lead in gasoline will continue at a rate corresponding to the increase in passenger cars and trucks over the next few years. There may also be some increase in the amount of lead used in gasoline causing a still further increase of total lead used in gasoline.

Gas Turbine Infuence

Some of you have expressed concern about the influence of the gas turbine on this picture because the gas turbine does not benefit from the use of tetraethyl lead in the fuel.

The gas turbine is being studied very carefully by the automotive industry for possible applications in road vehicles. Thus far, the turbine has suffered in comparison with the conventional piston engine chiefly in respect to fuel consumption and estimated cost of manufacture. One of the obstacles to manufacture in the quantities required is the high usage of critical materials in turbine blading and nozzle diaphragms. The situation is similar to the possible use of nickel, cadmium or silver in automotive storage batteries. There just isn't enough of these materials in sight to support the automotive market.

To be sure, over the next few years we may see some turbine-powered vehicles in applications where the turbine is especially suited but at this time it is difficult to see how they will have a very large influence on the overall fuel situation. Even the diesel engine, which has been on the scene for 25 years, and which occupies an important place in the commercial engine field, has captured only about 2 per cent of the total fuel market.

Research for the Future

Although the future for lead in the automobile industry seems pretty well assured, it would be well to look for new uses for lead. This would give the industry new markets either to expand its output or to offset losses due to technical changes in existing markets. Nothing is so certain as change. Already the automotive industry is studying the possibility of substituting aluminum for copper in radiators. Such a move might affect the use of solder. Likewise the industry is seeking substitutes for solder in body manufacture. Although these are comparatively small uses of lead they indicate the continual struggle for the use of the most economical material.

Although the lead-acid battery has never been seriously threatened in the automotive field, if research could show how to double the life of the lead-acid storage battery it would have tremendous economic value toward protecting the position of lead in this field. Within the past year, for example, improvements in battery manufacture and better voltage regulation have led to the introduction of a three-year guarantee on the batteries in some of the 1956 cars. Although at first sight this might seem unfavorable to the lead industry I think that in the long run such developments will strengthen the position of lead in one of its most important markets. The time to do the research is now because when the competitor comes on the scene it may be too late.

Finally, I would like to compliment the lead industries for their aggressiveness in finding lead and in keeping it in reasonable supply most of the time at a reasonable price. As long as this situation continues I believe that the future of lead in one form or another, because of its unique chemical and physical properties, is assured as far into the future as we can see.

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Malayan, Nigerian Strike Threats Influence Tin; Lead, Zinc Firmer On Reports U. S. Gov't Readies Further Barter Deals for Both Metals

By L. H. TARRING
London, England

August 7, 1956

THE copper market continues to prove better than the forecasts. Once the big U. S. producers had settled their wage negotiations, it had been feared that July might be a very dull month with little new buying and possibly some further recession in prices, since there was nothing spectacular in the European situation to offset anticipated dull conditions in the American market.

In fact, however, prices advanced during July, indicating that the actual volume of world consumption is still at a high level, and of course, when the trouble over the Suez Canal broke out towards the end of the month, it was hardly surprising to find the market show further strength, particularly as this was accompanied within a few days by the ending of the U. S. steel strike and the termination of the go-slow movement by maintenance men in British steel works, both of which factors indirectly had naturally tended to damp down market sentiment.

Conditions in the British motor car industry have not noticeably improved — the dispute at the big British Motor Corporation still being unsettled — and during August, of course, most of the British copper and brass fabricators and many other industrial establishments are closed for a time for the annual holidays.

Political Implications

While the bulk of the Rhodesian copper reaches European consuming points via the Cape, an appreciable quantity is nevertheless moved through the Suez Canal, but it is the wider political implications of the trouble there that seem to have affected the copper market. What the outcome will be is impossible to say at this stage, but despite some mobilization of the armed services in this country, there is, as yet, no indication that the Government intends to change its mind with regard to the proposed liquidation of 36,000 tons of copper from its strategic reserves.

It will be recalled that this metal was intended to be released, probably over a period of six months beginning with the latter part of August, and negotiations have been going on between the Board of Trade, the London Metal Exchange and other interested parties as to the most desirable method of accomplishing this.

So far, however, final agreement does not seem to have been reached, and no details are yet available as to the manner in which metal is to be released to the market. Whether, in the present circumstances, a further 6,000 tons of copper a month is likely to have any serious impact on open market values, remains a very open question. It will, no doubt, depend on the way in which the metal is sold, and more particularly on market conditions at the time.

U. K. COPPER STATISTICS

According to the British Bureau of Non Ferrous Metal Statistics U. K. stocks of copper at the end of May totalled 18,602 tons of blister and 53,111 tons of refined, compared with 21,443 tons and 55,038 tons respectively a month earlier. Consumers' stocks of refined metal rose from 32,480 tons at the end of April to 35,595 tons. U. K. production in May was 9,122 tons of primary refined and 8,781 tons of secondary refined and 861 tons of secondary blister. Details of consumption are given below.

OUTPUT OF MAIN COPPER AND ALLOY PRODUCTS IN THE UNITED KINGDOM

	May	5 months ending 31st May	31st May
	1956	1955	1956
PRODUCT			
UNALLOYED COPPER PRODUCTS			
Wire (1)	18,285	90,703	99,117
Rods, Bars & Sections	1,521	7,466	8,307
Sheet Strip & Plate	4,844	26,534	25,170
Tubes	4,545	20,122	22,173
Castings & Misc.	650	2,500	3,250
ALLOYED COPPER PRODUCTS			
Wire	1,627	7,940	8,200
Rods, Bars & Sections	10,941	66,154	58,315
Sheet, Strip & Plate	10,321	58,417	53,802
Tubes	1,983	9,281	9,751
Castings & Misc.	6,260	29,270	32,680
Copper Sulphate	4,289	17,146	22,156
TOTAL ALL PRODUCTS	65,266	335,533	342,921
Copper Content of Output	52,140	266,905	274,331
Consumption of Refined Copper (2)	41,747	197,940	208,688
Consumption of Copper & Alloy scrap (3) (Copper Content)	10,393	68,965	65,643

Note: (1) Consumption of H. C. Copper and Cadmium Copper Wire Rods for Wire and production of Wire Rods for Export. (2) Virgin and Secondary Refined Copper. (3) Consumption of copper in scrap is obtained by the difference between copper content of output and consumption of refined copper, and should be considered over a period since monthly figures of scrap consumption are affected by variations in the amount of work in progress.

RST Price Advanced

Meanwhile, the Rhodesian Selection Trust group, which kept its price to U. K. customers at £275 from July 2, even though this lagged well behind the market, at last raised it by £25 to £300 a ton c.i.f. U. K., electrolytic wirebar basis, on August 1st; but with the open market showing further strength about that time and subsequently the R. S. T. quotation is still appreciably below London Metal Exchange quotations. It is interesting to note, incidentally, that custom smelters in the United States have gradually hardened their price, until they are now fairly closely in line with the domestic producers' figure of 40 cents, and at the moment the London and American prices are closer in alignment than they have been for some time.

A factor which has no doubt influenced sentiment here to some extent is the renewed manifestations of African labor unrest in the Rhodesian copperbelt, where there have been several short-lived strikes at different mines. So far supplies to consumers have not been noticeably interfered with, but the atmosphere is an uncomfortable one and the rather obscure outlook in this respect is bound to influence market thinking to some extent.

Suez Canal Tin Movements

It was only to be expected that the Egyptian announcement of the nationalization of the Suez Canal should affect the tin market, since such a large proportion of the world's tin supplies normally moves to consumer points via this important sea-way.

Indeed, in 1955 over 100,000 tons of tin and tin ore were moved through the Canal from South to North, and any interruption in this channel of

AVERAGE BRITISH PRICES FOR COPPER, TIN, LEAD, ZINC

(Per Long Ton)

Mean of Bid and Asked Cash Quotation at Close of Morning Session on London Metal Exchange

	COPPER			TIN			LEAD		ZINC	
	Cash	3 Months	Settlement	Cash	3 Months	Settlement	Current Month	3rd Following	Current Month	3rd Following
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1954 Averages ..	248 17 11	239 17 7	249 0 11	719 8 11	709 17 7	720 6 7	98 8 12	94 7 4	78 5 4	77 16 11
1955 Averages ..	351 14 11	341 0 3	352 5 6	740 2 12	736 12 11	740 12 8	105 17 3	105 9 6	90 13 4	89 12 3
1956										
January	392 4 7	378 13 10	392 14 1	814 4 4	788 13 2	815 0 11	118 11 4	116 10 0	100 16 9	97 13 2
February	403 15 11	389 2 10	404 3 10	805 10 6	774 0 11	807 3 4	119 7 6	115 8 5	100 8 1	96 7 6
March	419 11 8	410 7 7	420 0 6	805 10 9	780 9 6	807 8 7	121 2 6	118 13 11	101 11 2	98 13 11
April	374 12 9	369 0 6	375 0 6	764 5 6	759 17 0	764 17 6	115 14 3	114 18 9	98 4 10	96 16 2
May	332 15 5	326 9 4	333 2 9	748 10 3	747 15 3	749 1 10	111 10 11	109 16 11	94 16 4	92 17 7
June	296 17 2	298 6 2	297 4 9	742 3 10	736 19 1	742 15 3	115 4 6	111 1 5	94 0 1	92 7 9
July	284 15 3	284 2 1	285 2 9	749 18 2	746 0 8	750 10 5	113 13 2	112 0 10	93 9 8	92 6 10

communication, which would slow down the movement of tin from the Eastern producing areas to consuming points, cannot be other than of importance at a time when supply and demand, as far as the market is concerned, are rather precariously balanced.

The labor situation in Malaya has continued unsettled and at one time a general strike of tin miners there was threatened for August 7, but although the Unions are reported to have voted in favor of a strike, their leaders have delayed fixing a definite date for the stoppage in the hope that a settlement of their grievances may yet be reached.

Nigerian Strike Threat

As there is also the threat of a major strike this month among Nigerian tin miners, it was hardly surprising that the tin market showed considerable strength, and on July 31 rose to £785 a ton. Once the immediate threat of a serious Malayan strike was removed, somewhat easier conditions supervened, helped by the August Bank Holiday in this country which is traditionally the beginning of the closure of many consuming works for their annual holidays.

The outlook is far from settled, however, as it is by no means certain that a stoppage of production in Malaya has been averted, and any interruption in supplies from that quarter would quickly be reflected in the market position, on the assumption that consumption keeps up at recent levels. Of this there seems no serious doubt, particularly now that the American steel strike is over and tinplate production there can be resumed on a full scale, and the slowing down of steel supplies to some U. K. tinplate producers by the go-slow movement of maintenance men in steel works here has also ended.

Lead Tone Firmer

When it is realized that in 1955 about 160,000 tons of lead and lead ore moved from South to North through the Suez Canal, it was only natural that the market should respond to the recent developments in Egypt, and the firmer tone thus created is likely to be helped by the latest announcement that further American barter purchases of European lead may be made.

As far as actual consumption is concerned, there has not been much major change in recent weeks, but some slowing down during the holiday month of August is a possibility. Thanks to the political uncertainties, however, it seems likely that most buyers will be anxious to assure their supply position as far as possible, and this may result in a larger demand than usual during the peak holiday season.

Steady Consumption Seen

Although all is still not well with the motor car industry in this country, and there are other clouds on the British economic horizon, industry as a whole is still going ahead at a fairly high rate and there seems

(Continued on page 13)

U. K. LEAD STATISTICS

Stocks of lead in the U. K. increased slightly in May, the British Bureau of Non Ferrous Metal Statistics reporting 20,361 tons of imported virgin in stocks at the end of the month and 10,176 tons of English refined, compared with 20,799 tons and 8,680 tons respectively at the end of April. Output of English refined during the month was 9,274 tons and consumption amounted to 29,752 tons. The following were the main outlets:-

CONSUMPTION OF LEAD IN THE UNITED KINGDOM BY MAIN TRADES

	Long Tons CONSUMPTION		
	May	Jan-May	
	1956	1955	1956
Cables	9,719	43,305	46,222
Batteries—As Metal	2,419	12,729	12,454
Battery Oxides	1,970	12,292	11,681
Tetraethyl Lead ...	1,469	9,395	9,026
Other Oxides and Compounds	1,964	11,588	10,559
White Lead	874	4,785	4,637
Shot	421	1,916	2,052
Sheet and Pipe	6,317	31,428	30,274
Foil and Collapsible Tubes	419	2,166	2,164
Other Rolled and Extruded	646	3,383	3,237
Solder	1,137	5,775	5,472
Alloys	1,306	6,793	6,139
Misc. Uses	1,091	5,644	5,257
TOTAL CONSUMPTION .	29,752	151,199	149,174
of which:			
Imported Virgin Lead	13,152	87,335	73,934
English Refined ...	7,534	26,672	34,724
Scrap Including Remelted	9,066	37,192	40,516

U. K. TIN STATISTICS

During May the U. K. consumption of tin improved to 2,000 tons, reports the British Bureau of Non Ferrous Metal Statistics. Consumers' stocks at the end of the month were slightly higher at 1,526 tons, compared with 1,483 tons a month earlier. U. K. smelter output in April (the latest figure available) was 1,924 tons, against 2,452 tons in March. Further details of consumption are given below:-

CONSUMPTION OF TIN IN THE UNITED KINGDOM BY MAIN TRADES

(excluding Tin in Scrap)

TRADE	Long Tons		
	May	Jan-May	
	1956	1955	1956
TINPLATE	944	4,239	4,220
TINNING:			
Copper Wire	39	224	212
Steel Wire	9	48	46
Other	70	357	338
TOTAL	118	629	596
SOLDER	220	971	1,114
ALLOYS:			
Whitemetal	282	1,702	1,453
Bronze & Gunmetal ..	239	1,074	1,153
Other	35	199	171
TOTAL	556	2,975	2,777
WROUGHT TIN (1)			
Foil & Sheets	19	159	126
Collapsible Tubes	26	188	144
Pipes, Wire & Capsules	5	20	21
TOTAL	50	367	288
CHEMICALS (2)	101	419	433
OTHER USES (3)	11	52	52
TOTAL ALL TRADES	2,000	9,652	9,480

Notes:- (1) Includes Compo and "B" Metal. (2) Mainly Tin Oxides. (3) Mainly powder.

U. K. ZINC STATISTICS

U. K. production of raw zinc in May was 6,039 tons, according to the British Bureau of Non Ferrous Metal Statistics, and consumption (including remelted and secondary) amounted to 27,922 tons. Stocks fell moderately during the month from 49,129 tons to 47,266 tons. Of the latter figure consumers held 21,198 tons, including 10,812 tons of Prime Western and g. o. b. and 8,595 tons of high grade.

CONSUMPTION OF ZINC IN THE UNITED KINGDOM BY MAIN TRADES

TRADE	May	Jan.-May	
	1956	1955	1956
Brass	9,326	52,212	48,707
Galvanizing	9,825	45,854	45,987
of which:-			
General	2,977	14,700	14,683
Sheet	3,038	14,910	13,615
Wire	1,975	9,475	9,412
Tube	1,835	6,769	8,277
Rolled Zinc	2,107	9,373	9,888
Zinc Oxide	2,412	13,877	12,267
Zinc Diecasting & Forming Alloy ..	2,547	17,453	15,592
Zinc Dust	725	4,628	3,895
Misc. Uses	980	5,038	4,931
TOTAL ALL TRADES ..	27,922	148,435	141,267
of which:-			
Virgin Zinc: High Purity (99.99%) .	2,883	18,875	17,519
Electro & High Grade (99.95%)	5,555	27,867	28,401
Prime Western G.O.B. & Debased	11,401	62,274	54,635
Remelted Zinc	490	2,455	2,409
Brass & other Copper Alloy Scrap (Zinc Content) ..	4,519	21,755	22,878
Scrap Zinc Metal Alloy, Residues etc. (Zinc Content) ..	3,074	15,209	15,425

New Nickel Sources Necessary To Meet Growth In Demand

(Continued from page 8)

ment. Since it is questionable if the demand can be supplied from Canadian deposits, development of Cuban ores is indicated. These ores are easy to mine, contain 4 strategic metals often used together (nickel, cobalt, chromium, and iron) and promising processes for recovering nickel from these ores have been demonstrated and should be fully developed. Considerations of strategic economy indicate the need for a stockpile; however, this stresses the need to broaden the base of supply in order to lessen dependence on a static stockpile, and by increased supply, encourage improved utilization of this material important both for weapons of war and for the growth of industry. At the same time, the long range outlook for increasing nickel consumption should cushion against any potential surplus supply resulting from Government or industrial efforts to expand the production base.

British Metal Markets

(Continued from page 12)

nothing at the moment to suggest that there will be any serious falling off in lead consumption over here, on the Continent of Europe, or in the United States in the immediate future.

London prices are now rather higher in relation to New York than they have been recently, but whether they will be carried high enough to attract supplies away from the United States remains to be seen.

Zinc Steady

For the greater part of July the London zinc market presented a very steady appearance, any bearish factors which had developed in recent months having been pretty fully offset by the substantial quantities of foreign zinc acquired by the United States by barter transactions.

Consumption here was naturally adversely affected by the outbreak of a strike at the British Motor Corporation's plants but with most of the surplus metal taken off the market, this was not reflected in the price situation. The current month is likely to be one of rather sluggish demand owing to the many works which will be closed for a time for annual holidays, but in the meanwhile the Suez imbroglio has firmed up sentiment, due partly to the general political tension, and partly to the fact that large quantities of zinc and zinc concentrates are normally transported via the Canal to European destinations.

Russian zinc continues to be offered pretty regularly in this country and also on the Continent of Europe, and it begins to look as if this must be regarded as a fairly permanent feature of the situation. When Russian zinc shipments began about a year ago there was considerable uncertainty as to whether they were more than a flash in the pan, but current indications are that Russia is in the zinc exporting business, at any rate for sometime to come, if not permanently.

Washington Report

(Continued from page 5)

and which will remain available until spent.

The Bureau plans expanding its research in the fields of copper, lead and zinc, with known reserves of these materials to be evaluated and the search for new ore sources speeded up. The minerals program will cover more than 70 items.

Texas Smelter for Sale

Disposal of the Government-owned Longhorn tin smelter at Texas City, Texas, as authorized by Public Law 608, 84th Congress, 2nd session, got under way July 19 with announcement of its being offered for sale or lease advertised throughout the country and in the Federal Register.

The announcement emphasized the site development and wide variety of processing units. The Federal Facilities Corp., which operates the tin smelter, is handling its disposal. Proposals for the purchase or lease of the smelter must be in writing and submitted to the FFC at any time through November 1, 1956.

U. S. Largest Uranium Producer

The Atomic Energy Commission disclosed July 31 that the United States has become "the free world's leading producer of uranium ore," having taken the production lead from another country during the last six months. AEC declined to say which country but presumably it was Canada or the Belgian Congo.

In its report to Congress covering the six months ended June 30, AEC said the U. S. is producing domestically nearly 3,000,000 tons a year of the material which is basic to production of weapons and to all peacetime uses of atomic energy. This compares with domestic production of "only about 70,000 tons" in 1948, AEC said, adding that U. S. production of ore "is expected to reach 5,000,000 or 6,000,000 tons a year."

GSA To Buy Minerals

Acting Secretary of the Interior Clarence A. Davis announced that the Department has taken the first step to implement a strategic minerals purchase program in accord with Public Law 733, 84th Congress.

This action, Mr. Davis said, was the delegation of authority to the General Services Administration to purchase domestic tungsten, asbestos, fluorspar and columbium-tantalum, under regulations to be promulgated by the GSA with concurrence by the Secretary of the Interior.

The program is designed to maintain the domestic production of these minerals in the United States, its territories and possessions. The effect will be to extend over a limited additional time Government purchases of the four minerals to assist producers in reorienting to normal competitive market conditions.

Since producers of the four minerals reached their present production capacities largely as a result of defense programs which had little relationship to normal commercial forces, both Congress and the administration considered it necessary to provide a transition period for an orderly adjustment to economic impacts in this segment of the mining industry, Mr. Davis continued. He pointed out that the Department supported the legislation and is working on a long-term mineral program.

Alaskan Copper Ore

Ores from four Alaskan mineral deposits can be treated by standard methods to produce commercial-grade copper concentrates, according to a Bureau of Mines report.

The report tells of preliminary laboratory studies in which samples from the Moth Bay mine, Revillagigedo Island; the Threeman mine, Port Fidalgo area; the Golden Zone mine, near Colorado Station; and the Kathleen-Margaret prospect, Maclaren River, near Paxton, were treated by various ore-dressing methods. The studies were part of the Bureau's continuing investigation of strategic minerals in the Territory.

R. R. Wells, supervising metallurgist at the Bureau's Juneau, Alaska, station where the tests were made, wrote the report. He says copper recoveries, using standard flotation techniques, ranged from nearly 79 per cent for the Moth Bay ore to over 95 per cent for the Kathleen-Margaret sample. The highest-grade concentrate, assaying 36.7 per cent copper, was obtained from the Kathlee-Margaret sample, but each of the ores yielded a commercial-grade concentrate.

The report describes the ore samples and presents results of the metallurgical tests in detail. It contains an index map of Alaska and several tables.

A copy of report of Investigations 5245, "Laboratory Concentration of Various Alaskan Copper Ores," can be obtained from the Bureau of Mines, Publication Distribution Section, 4800 Forbes Street, Pittsburgh 13, Pa. It should be identified by number and title.

United States Duties on Principal Ore and Metal Imports

(Including Revisions in Effect June 30, 1956, under Geneva Agreements)

(Quantities Are in Pounds Unless Otherwise Stated; n.s.p.f. Stands for "Not Specially Provided For.")

COPPER

NOTE—The excise tax of 4c a pound on copper (which was reduced to 2c a pound by the Geneva Trade Agreement) was suspended in April, 1947, until March 31, 1949, and on expiration it was further suspended until June 30, 1950. The tax was reimposed on July 1, 1950. It was suspended again on May 22, 1951, retroactive to April 1, 1951, and until February 15, 1953, and again until June 30, 1954. Suspension further extended to June 30, 1955, and again until June 30, 1958. If import tax is restored, the 1956 Geneva Agreement provides for 5% reductions effective on June 30 of 1956, 1957 and 1958, provided the price is above 24c; if the price is below 24c the 2c tax would prevail.

Copper ore and concentrates, usable as flux, etc., copper content	free
Copper ore and concentrates, product of Cuba and Philippines, copper content	free
Copper ore and concentrates, copper content	free
Regulus, black, or coarse copper, and cement copper, copper content	free
Unrefined black, blister, and converter copper in pigs or converter bars, copper content	free
Refined copper in ingots, plates or bars, copper content	free
Copper rolls, rods or sheets	1¼c lb.
Copper seamless tubes and tubing	3½c lb.
Copper plain wire	12½%
Copper brazed tubes†	5.25 lb.
Old and scrap copper, fit only for remanufacture; and scale and clippings, copper content	free

BRASS

Brass rods, sheets, plates, bars, strips, muntz or yellow metal sheets, sheathing, bolts, piston rods, shafting and bronze rods, tubes and sheets	2c lb.
Brass tubes and tubing, seamless	2c lb.
Brass tubes, brazed, angles and channels	6c lb.
Brass and bronze wire	12½%

LEAD

NOTE—Import duties on lead-bearing ores, flue dust, and mattes of all kinds, lead bullion or base bullion, lead in pigs and bars, lead dross, reclaimed lead and antimonial lead were suspended Feb. 12, 1952, and reimposed on June 26, 1952. Lead scrap duty was reimposed July 1, 1952.

Lead-bearing ores and mattes, n. s. p. f., lead content	¾c lb.
Bullion or base bullion, lead content	1 1/16c lb.
Pigs and bars, lead content	1 1/16c lb.
Reclaimed, scrap, dross, lead content	1 1/16c lb.
Babbitt metal and solder, lead content	1 1/16c lb.
Pipe, sheet, shot, glaziers' lead, and wire	1 5/16c lb.
Type metal and antimonial lead, lead content	1 1/16c lb.
White lead	1.05c lb.
Litharge	1¼c lb.
Red lead	15/16c lb.
Orange mineral	1c lb.

ZINC

NOTE—Import duties on zinc-bearing ores, and on zinc in blocks, pigs and slabs were suspended Feb. 12, 1952, and reimposed on July 24, 1952. Tax on old zinc and dross and skimmings reimposed July 1, 1953.

Zinc-bearing ores, except pyrites containing not more than 3% zinc, zinc content	6/10c lb.
Zinc contained in zinc-bearing ores, n. e. s., not recoverable, zinc content	6/10c lb.
Zinc, old and worn out, fit only for remanufacture	¾c lb.
Dross and skimmings	¾c lb.
Zinc in blocks, pigs, or slabs	7/10c lb.
Zinc in sheets	1c lb.
Zinc sheets, plated with nickel or other base metal, or solutions	1⅛c lb.
Zinc dust	7/10c lb.
Zinc die-casting alloys	12½%
Zinc oxide and leaded zinc oxides containing not more than 25% lead, dry	3/5c lb.
ground in or mixed with oil or water	1c lb.

MISCELLANEOUS METALS AND ORES

Aluminum, metal and alloys, crude, except alloys elsewhere provided for†	1.40c lb.
Aluminum scrap	free
Aluminum plates, sheets, bars, rods, circles, squares, etc†	2.80c lb.
Antimony ore, antimony content	free
Antimony metal and regulus	2c lb.
Antimony needle or liquidated	¼c lb.
Antimony oxide	1c lb.
Antimony sulphides	½c lb. & 12½%
Arsenic, metallic†	2.80c lb.
Arsenious acid or white arsenic	free
Bauxite, crude*	free
Bauxite, refined	¼c lb.
Bismuth	1⅞%
Bismuth salts and compounds	35%
Beryllium metal and compounds†	23½%
Beryllium ore	free
Cadmium	3¾c lb.
Cadmium flue dust, cadmium content	free
Chrome ore or chromite	free
Cobalt ore and concentrates, cobalt content	free
Chrome or chromium metal†	11½%
Cobalt metal	free
Magnesium, metallic†	17.20c lb.
Magnesium scrap	free
Magnesium alloys, powder, sheets, wire†	19c lb. & 9½%
Manganese ores, containing over 10% manganese, manganese content	¼c lb., except Cuba, free
Molybdenum ore or concentrates, molybdenum content†	33c lb.
Nickel ore, matte and oxide	free
Nickel and alloys, nickel chief value, n. s. p. f., in pigs, ingots, shot, cubes, grains, cathodes, or similar forms	1¼c lb.
Nickel, bars, rods, plates, sheets, castings, strips, wire or electrodes	12½%
Nickel tubes, tubing	6¼%
(if cold rolled, drawn or worked—2½% extra)	
Nickel scrap	free
Platinum, ores, platinum content, oz. troy	free
Platinum, grain, nuggets, sponge and scrap, oz. troy	free
Platinum in ingots, bars, sheets, or plates, not less than ⅛ in. thick, oz. troy	free
Quicksilver or mercury	25c lb.
Selenium and salts	free
Tantalum	12½%
Tin ore, cassiterite, and black oxide of tin, tin content	free
Tin in bars, blocks, pigs, grain, granulated, and scrap, and alloys, chief value tin, n. s. p. f.	free
Tungsten ore or concentrates, tungsten content	50c lb.

*Crude bauxite import duty suspended for two years, effective July 16, 1954. †Tariff to be reduced 5% on June 30, 1957 and 5% on June 30, 1958, under Geneva Agreement which expires on June 30, 1959.

COPPER DOWNHILL RIDE CHECKED; DOMESTIC PRICE SPREAD NARROWS: PRODUCERS 40c, SMELTERS 39¾c

Brass Ingots Up 1 to 3c; Lead, Zinc Steady as Gov't Readies New Barter Deals for Foreign Supplies; Tin Stronger; Aluminum Pig Raised 1c a Lb.

August 6, 1956

COPPER'S downhill ride appeared to have been checked at home and abroad during the month in review. The domestic price spread narrowed to 0.50c a pound; primary producers maintained their electrolytic copper price at 40.00c a pound but custom smelters increased their quotation 0.50c a pound on August 6 to 39.50c.

Electro copper prices overseas moved upward also. The Rhodesian Selection Trust hiked its British consumer price £25 on August 1 to £300 a long ton (equivalent to 37.50c a pound). The cash bid price on the London Metal Exchange on August 3 closed at £318, equivalent to 39.75c a pound. Union Miniere du Haut Katanga, Belgian's leading producer, advanced its copper quotation 90 points on August 6 to the equivalent of 37.80c a pound f.a.s. New York. The French agency, GIRM, that does the copper buying for the large French industrial firms, on August 6 established its price at 312 francs per kilo, equivalent to 39.80c a pound f.a.s. New York; the price had been 305 francs per kilo, or about 38.825c f.a.s. New York.

The lead and zinc markets continued to display a steady stone, with lead at 16.00c a pound New York and Prime Western zinc at 13.50c a pound East St. Louis.

Spot Straits tin at New York closed at 99.25c a pound on August 6 as against 96.375c on July 20. Secondary aluminum ingot prices were up sharply, generally in anticipation of an increase in the primary aluminum quotation once producers settle their labor difficulties. Quicksilver was steady. Silver displayed a bit more strength, advancing 0.125c an ounce on August 6 to 90.25c an ounce New York.

Smelter Electro 39½c

Custom smelters increased their electrolytic copper selling price another 0.50c a pound on August 6 to 39.50c a pound delivered for August and September shipment. Since July 12 the smelter quotation has been raised 2.00c a pound. On July 12 it moved up from 37.50c to 38.00c. The next rise was on August 1 to 38.50c. On August 3, it moved up to 39.00c. As the result of the increase on August 6 to 39.50c, the smelter quotation is now only 0.50c a pound below the producers' price of 40.00c a pound delivered.

Domestic consuming demand played a more important role in the advance on August 6 then it did for the previous increases. The other advances was due partly to the uncertain labor situation, to the good demand for the metal from abroad and to the tense international situation resulting from Egypt's seizure of the Suez Canal.

Labor Outlook More Promising

The labor situation in the industry was more promising, both at home and abroad. The uncertainty as to whether the Laurel Hill Refinery of Phelps Dodge Refining Corp. would remain in operation was resolved by an agreement reached between the AFL-CIO United Steelworkers Union and the company. Although the previous contract had expired July 31, workers agreed to remain on their jobs for the remainder of the week ending August 3. As the result of the new contract, there was no interruption of production at the beginning of the following week, August 6. Previously, it had been uncertain whether the workers would remain on the job beginning August 6.

LATE NEWS, PRICE CHANGES

Copper: Custom smelters on August 7 increased their electrolytic copper price another 0.25c to a basis of 39.75c a pound delivered; on August 17, smelter electro was quoted at 39.50 to 39.75c. Smelters on August 17 paid 32.50c a pound for No. 2 heavy copper and wire scrap.

Aluminum Major primary producers increased their basic aluminum pig price 1.00c a pound, to 25.00c, and aluminum ingot by 1.20c to a basis of 27.10c a pound for the 30-pound, 99 per cent plus ingot. All producers moved to the higher levels by August 13. Effective August 14, Aluminum Ltd. Sales Inc., U. S. distributor for Aluminum Co. of Canada, increased its basic aluminum pig price 1.00c to a basis of 25.00c a pound.

Tin: Spot Straits tin was quoted at 98.75c a pound New York on August 17; prompt metal was quoted at 98.75c.

Silver: Handy & Harman on August 10 increased the New York silver price 0.25c an ounce to a basis of 90.75c an ounce.

Labor peace on the home front still remaining to be negotiated are new wage pacts between the Steelworkers Union and Kennecott Copper Corporation's refinery at Garfield, Utah, and American Smelting & Refining Company's smelter, also at Garfield. Present pacts at both Garfield plants expire August 31.

Overseas's Labor Difficulties

The strike at the Roan Antelope mine at Luanshya, Northern Rhodesia, which tied up the mine on August 2 and 3, was ended. Because the African mine workers' union has called a succession of strikes since July, the copper mining companies have declared a dispute with the African Mine Workers' Union and have asked the Governor of Northern Rhodesia, Sir Arthur Benson, to set up a Board of Inquiry to report on causes of the present unrest in the Copperbelt.

From Leopoldville, Belgian Congo, there was a report of a demand for political independence in 30 years for the Belgian Congo. The manifesto asked for an official declaration on the demand for independence.

The union representing workers at Anaconda's Potrerillos property in Chile have reached a settlement with the company that is to remain in effect for 15 months. The settlement put to rest reports that the workers on August 3 were preparing to take a strike vote.

Scrap Copper Prices

Smelters, in an effort to attract scrap copper which domestic dealers were reluctant to sell in the face of the rising market, offered 34.00c a pound for No. 2 heavy copper and wire scrap on August 6, 2.00c a pound more than the 32.00c level (for July 20) last quoted in this space.

Brass and bonze ingot makers also found it more difficult to acquire needed copper and brass scrap for ingotmaking, and also had to pay more for such material. Consequently, brass and bronze ingot selling prices, on July 30, were advanced 1.00c to 3.00c a pound.

Lead Demand Improves

Lead demand has shown improvement and producers have been booking fairly good orders. An encouraging aspect of the situation was that the business for August shipment was placed at the spot price of 16.00c a pound New York and 15.80c St. Louis. Consumers had not as yet purchased

all the lead they require for August and continued strength in the London market may serve to simulate domestic buyers.

Foreign demand for lead has been exceptionally good. In the past foreign consumers generally purchased on a declining market. More recently, however, they have shown greater interest in the market when the price trend was upward.

U. S. Foreign Purchases

While the Government is expected to enter the market shortly for additional purchases of foreign lead and zinc for the U. S. supplemental stockpile, under the surplus farm product barter program, new acquisitions are expected to be limited due to new restrictions on such purchases. (See Washington Report on page 5.)

Zinc Market Dull

The domestic zinc market continued dull. The slow process of steel mills getting back into producing has been holding up zinc shipments. Even if the steel industry speeds up final settlement of its labor contracts, it will probably take another week before mill operations return to normal, and possibly another week before the mill sheet departments are ready for galvanizing operations.

The zinc price situation remained steady, on the basis of 13.50c a pound East St. Louis for the Prime Western grade.

Malayan Tin Labor Picture

The general strike picture in Malaya at this writing was far from clear although dispatches from Penang were to the effect that the Malayan Mining Employes' Union had withdrawn its go-slow order which had been scheduled to become effective August 5.

Spot Straits tin at New York on August 6 was quoted at 99.25c a pound as against the last previous price in this space of 96.375c for July 20. The high for the July 20 - August 6 period was 100.25c registered on July 30, with the low of 95.75c noted for July 23.

Aluminum Price Boost?

A spokesman for the Aluminum Company of America said the firm is "studying the possibility of increasing the price of its products." The spokesman said that while no immediate action on a price increase is planned, the "possibility is that there eventually will be one." Trade circles estimated that the increase, when it comes, may be as much as 1.50c a pound. Secondary aluminum ingot prices, meanwhile, have been moving upward, as have been smelters' scrap aluminum buying prices, in anticipation of a primary aluminum price boost once the primary producers settle their labor difficulties.

Alcoa and the Aluminum Workers International Union on August 2 signed a three-year contract which kept 15,000 Alcoa workers on the job. But some 28,000 members of the United Steelworkers Union continued their strike, begun August 1, which has closed 21 plants of Alcoa and Reynolds Metals Co.

Quicksilver Quiet

The quicksilver market remained quiet with consumer demand almost completely lacking due to seasonal influences. Spot quicksilver was unchanged at $255 to $257 per flask of 76 pounds. This range was established on July 3.

Silver Price Raised

Handy & Harman quoted New York silver on August 6 at 90.25c an ounce, up 0.125c an ounce from 90.125c level established on July 5. The advance resulted from an increased demand for silver following reopening of plants which had been closed for vacations. The Handy & Harman plant, which also had been closed for a two-week vacation, resumed operations August 6.

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STANDARD METAL DIRECTORY — The authoritative reference guide for the iron, steel and metals industries. Detailed reports on steel mills and foundries — Officers, capitalization, equipment, capacity, products, raw materials consumed.

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Daily Metal Quotations in July, 1956

The following quotations are taken from the Daily Metal Reporter

(In Cents Per Pound)

JULY	Copper				Tin Straits New York		Lead		Zinc					Aluminum	Antimony	Silver
	Producers' Price Del. Conn.	Custom Smelters' or Outside Price	Electro f. o. b. Refinery	Lake Del.	Spot	Prompt	New York	Outside St. Louis	Prime West. f. o. b. E. St. Louis	Prime West. Del. N. Y.	Brass Spec. f. o. b. E. St. Louis	High Grade Delivered	Spec. High Grade Delivered	Virgin 99%	Domestic Spot 99.5% f.o.b. Laredo	(Cents Per Ounce) New York
2	46.00	40.00	42.70	46.00	92.875	92.875	16.00	15.80	13.50	14.00	13.75	14.85	15.25	25.90	33.00	90.25
3	46.00	40.00	42.70	46.00	93.125	93.125	16.00	15.80	13.50	14.00	13.75	14.85	15.25	25.90	33.00	90.25
5	46.00	40.00	42.70	46.00	94.375	94.375	16.00	15.80	13.50	14.00	13.75	14.85	15.25	25.90	33.00	90.125
6	46.00	37.50	41.45	46.00	94.75	94.75	16.00	15.80	13.50	14.00	13.75	14.85	15.25	25.90	33.00	90.125
7	46.00	37.50	41.45	46.00	.....	.....	16.00	15.80	13.50	14.00	13.75	14.85	15.25	25.90	33.00	.....
9	46.00	37.50	41.45	46.00	96.25	96.25	16.00	15.80	13.50	14.00	13.75	14.85	15.25	25.90	33.00	90.125
10	43.00	37.50	41.45	46.00	95.375	95.375	16.00	15.80	13.50	14.00	13.75	14.85	15.25	25.90	33.00	90.125
11	40.00	37.50	38.45	40.00	94.625	94.625	16.00	15.80	13.50	14.00	13.75	14.85	15.25	25.90	33.00	90.125
12	40.00	38.00	38.70	40.00	95.625	95.625	16.00	15.80	13.50	14.00	13.75	14.85	15.25	25.90	33.00	90.125
13	40.00	38.00	38.70	40.00	96.00	95.875	16.00	15.80	13.50	14.00	13.75	14.85	15.25	25.90	33.00	90.125
14	40.00	38.00	38.70	40.00	.....	.....	16.00	15.80	13.50	14.00	13.75	14.85	15.25	25.90	33.00	.....
16	40.00	38.00	38.70	40.00	96.125	96.125	16.00	15.80	13.50	14.00	13.75	14.85	15.25	25.90	33.00	90.125
17	40.00	38.00	38.70	40.00	96.00	96.00	16.00	15.80	13.50	14.00	13.75	14.85	15.25	25.90	33.00	90.125
18	40.00	38.00	38.70	40.00	95.75	95.75	16.00	15.80	13.50	14.00	13.75	14.85	15.25	25.90	33.00	90.125
19	40.00	38.00	38.70	40.00	96.25	96.25	16.00	15.80	13.50	14.00	13.75	14.85	15.25	25.90	33.00	90.125
20	40.00	38.00	38.70	40.00	96.375	96.375	16.00	15.80	13.50	14.00	13.75	14.85	15.25	25.90	33.00	90.125
21	40.00	38.00	38.70	40.00	.....	.....	16.00	15.80	13.50	14.00	13.75	14.85	15.25	25.90	33.00	.....
23	40.00	38.00	38.70	40.00	95.75	95.75	16.00	15.80	13.50	14.00	13.75	14.85	15.25	25.90	33.00	90.125
24	40.00	38.00	38.70	40.00	96.25	96.25	16.00	15.80	13.50	14.00	13.75	14.85	15.25	25.90	33.00	90.125
25	40.00	38.00	38.70	40.00	97.625	97.625	16.00	15.80	13.50	14.00	13.75	14.85	15.25	25.90	33.00	90.125
26	40.00	38.00	38.70	40.00	97.75	97.75	16.00	15.80	13.50	14.00	13.75	14.85	15.25	25.90	33.00	90.125
27	40.00	38.00	38.70	40.00	98.50	98.50	16.00	15.80	13.50	14.00	13.75	14.85	15.25	25.90	33.00	90.125
28	40.00	38.00	38.70	40.00	.....	.....	16.00	15.80	13.50	14.00	13.75	14.85	15.25	25.90	33.00	.....
30	40.00	38.00	38.70	40.00	100.25	100.125	16.00	15.80	13.50	14.00	13.75	14.85	15.25	25.90	33.00	90.125
31	40.00	38.00	38.70	40.00	99.375	99.375	16.00	15.80	13.50	14.00	13.75	14.85	15.25	25.90	33.00	90.125
AV.	**41.56**	**38.14**	**39.61**	**41.68**	**96.143**	**96.131**	**16.00**	**15.80**	**13.50**	**14.00**	**13.75**	**14.85**	**15.25**	**25.90**	**33.00**	**90.14**
HI.	**46.00**	**40.00**	**45.70**	**46.00**	**100.25**	**100.125**	**16.00**	**15.80**	**13.50**	**14.00**	**13.75**	**14.85**	**15.25**	**25.90**	**33.00**	**90.25**
LO.	**40.00**	**37.50**	**37.20**	**40.00**	**92.875**	**92.875**	**16.00**	**15.80**	**13.50**	**14.00**	**13.75**	**14.85**	**15.25**	**25.90**	**33.00**	**90.125**

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Copper Brands

Deliverable Against Commodity Exchange, Inc.

Brand or Marks	Producer	Grade
B. E. R.	American Smelting & Refining Co. (Baltimore, Md.)	Electrolytic
P. A.	American Smelting & Refining Co. (Maurer, N. J.)	Electrolytic
T	American Smelting & Refining Co. (Tacoma, Wash.)	Electrolytic
B. & M.	Anaconda Copper Mining Co.	Electrolytic
AE	Andes Copper Mining Co.	Electrolytic
BOLIDEN	Bolidens-Gruvaktiebolag	Electrolytic
C. C. R.	Canadian Copper Refiners Ltd. (Montreal)	Electrolytic
C de P Peru	Cerro de Pasco Corporation	Electrolytic
C. C. C.	Chile Copper Company	Electrolytic
F E C	Falconbridge Nickel Mines, Ltd.	Electrolytic
K U E	Kennecott Copper Corp.	Electrolytic
L. M. C.	Lewin Metals Corporation	Electrolytic
M U F	Mufulira Copper Mines, Ltd.	Electrolytic
N A	Norddeutsche Affinerie	Electrolytic
O R C	Ontario Refining Co., Ltd.	Electrolytic
A. L. S.	Philps Dodge Refining Corp. (For Adolph Lewisohn Selling Corp.)	Electrolytic
L. N. S.	Phelps Dodge Refining Corp.	Electrolytic
P • D	Phelps Dodge Corporation	Electrolytic
N. E. C.	Raritan Copper Works	Electrolytic
R E C	Rhokana Corporation	Electrolytic
B O R	Rudnici Bakra i Topionice	Electrolytic
U M K	Union Miniere du Haut Katanga	Electrolytic
D R W	†United States Metals Refining Co.	Electrolytic
AMCO	†United States Metals Refining Co.	Electrolytic
OFHC	†United States Metals Refining Co.	Electrolytic
W E K	Zinnwerke Wilhelmsburg G.m.b.H.	Electrolytic

†Subsidiary, The American Metal Co., Ltd.

Brand or Marks	Producer	Grade
C & H	Calumet & Hecla Consolidated Copper Co.	Lake
C. R.	Copper Range Company	Lake
Q. M. CO.	Quincy Mining Company	Lake

Brand or Marks	Producer	Grade
B. C. R.	British Copper Refiners, Ltd.	Fire Refined High Conductivity
N. H. E.	Nassau Smelting & Refining Co., Inc.	Fire Refined High Conductivity
A M CO	United States Metals	Fire Refined High
R H C	Refining Company	Conductivity

Brand or Marks	Producer	Grade
* * * (3 Star)	Braden Copper Company	Fire Refined
K C M	Kennecott Copper Corporation	(other than
M T D	Messina (Transvaal) Development Co.	Lake & Fire Refined
P. D. M.	Phelps Dodge Corporation	High
R	†United States Metals Refining Company	Conductivity)

Official List of Approved Refiners

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Andes Copper Mining Co.
Bolidens Gruvaktiebolag
Canadian Copper Refiners, Ltd.
Cerro de Pasco Copper Corp.
Chile Copper Company
Consolidated Mining & Smelting Co.
Falconbridge Nickel Mines, Ltd.
Kennecott Copper Corp.
Lewin Metals Corp.
Mufulira Copper Mines, Ltd.
Norddeutsche Affinerie
Ontario Refining Co., Ltd.
Phelps Dodge Refining Corp.
Phelps Dodge Corporation
Raritan Copper Works
Rhokana Corporation
Rudnici Bakra i Topionice
Union Miniere du Haut Katanga
United States Metals Refining Co.
Zinnwerke Wilhelmsburg G.m.b.H.

Lead Brands

Refined At	Producer	Brand Mark
Federal, Ill., U. S.	American Smelting & Refining Co.	•ALTON
Carteret, N. J., U. S.	United States Metals Refining Co.	••A M CO
Monterrey, Mexico	American Smelting & Refining Co.	•ASARCO MONTERREY
Port Pirie, Australia	Broken Hill Associated Smelters	•B.H.A.S.
Indianapolis, Ind., U. S.	National Lead Co., American Lead Plant	†aBLUE ARROW AMERICAN LEAD CORP
Braubach a/Rhein, Germany	Blei-und Silberhutte Braubach	•Braubach dopp. raff. Deutschland
Idaho, U. S.	Bunker Hill Smelter	•BUNKER "C" HILL
Orya, Peru	Cerro de Pasco Copper Corp.	•CERRO PERU
Collinsville, Ill., U. S.	St. Louis Smelting & Refining Co.	†aCHEMICAL ST. L. S. & R. CO.
Monterrey, N. L., Mexico	Compania Metalurgica Penoles, S.A.	••C.M.F. y A.M.
Alton, Ill., U. S.	St. Joseph Lead Company	•DOE RUN
Oker, Germany	Unterharzer Berg- und Huttenwerke	*HARZ 99.985, HARZ 99.9
Joplin, Mo., U. S.	Eagle-Picher Mining & Smelting Co.	•EAGLE-PICHER
Kamioka, Japan	Mitsui Mining Co.	•E.M.K.
Stolberg, Rhineland, Germany	Stolberger Zinc Aktiengesellschaft fur Bergbau und Hattenbetrieb	•Eschweiler raffine
Federal, Ill., U. S.	American Smelting & Refining Co.	•FEDERAL
Chicago, Ill., U. S.	Goldsmith Bros. Smelting & Refining Co.	†G B
Hoboken, Belgium	Societe Generale Metallurgique de Hoboken	•H.E.R. Escaut
Alton, Ill., U. S.	St. Joseph Lead Company	•HERCULANEUM
Omaha, Neb., U. S.	International Smelting & Refining Co.	•ILR
Monsanto, Ill., U. S.	Lewin-Mathes Co.	†MONSANTO
Monteponi, Italy	Societa di Monteponi	•Monteponi
San Gavino Monreale, Sardinia, Italy	Montevecchio Societa Italiana del Piombo e dello Zinco	•Montevecchio
Hammond, Ind., U. S.	Metals Refining Company	†M R CO METALS REFINING CO.
Omaha, Neb., U. S.	American Smelting & Refining Co.	•OMAHA & GRANT
Overpelt, Belgium	Compagnie des Metaux d-Overpelt-Lommel et de Corphalie, S.A.	•Overpelt extra-raffine O.V.-L.L.-Dur.
Megrine, Tunis	Ste. Min. & Metall. de Penarroya	•Penarroya
Penarroya, Sopwith & Cartagena, Spain	Ete Min. & Met. de Penarroya	•Penarroya
Perth Amboy, N. J., U. S.	American Smelting & Refining Co.	•PERTH AMBOY
Genoa, Italy	Societa di Pertusola	•Pertusola
Alton, Ill., U. S.	St. Joseph Lead Company	•ST. JOE
Collinsville, Ill., U. S.	St. Louis Smelting & Refining Co.	†aST. L. S. & R. CO.
Selby, Calif., U. S.	American Smelting & Refining Co.	•SELBY
Trail, B. C., Canada	Consolidated Mining & Smelting Co. of Canada, Ltd.	•TADANAC
Baelen-Usines, Belgium	Ste des Mines and Founderies de Zinc de la Vieille-Montagne Anglem	•Three Stars Vieille-Montagne Bar
Mezica, Yugoslavia	Central European Mines, Limited	•TRECA
Perth Amboy, N. J., U. S.	American Smelting & Refining Co.	•TSUMCO
Hoboken, Belgium	The Tsumeb Corporation	•TSUMCO
Midvale, Utah, U. S.	United State Smelting, Refining & Mining Company	•USS CO
E. Chicago, Ind., U. S.	United States Smelting, Refining & Mining Company	•U S S CO ELECTRO
Norfolk, Va., U. S.	Virginia Lead Smelting Corp., The	†aVIRGINIA
Staten Island, N. Y., U. S. A.	Nassau Smelting & Refining Co.	Nassau Blue
Newark, N. J., U. S. A.	Hudson Smelting & Refining Co.	Hudson
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aSubsidiary of National Lead Co.

Copper Statistics Reported by Copper Institute

Combined Totals in U. S. A. and Outside U. S. A.

(In tons of 2,000 pounds)

	Crude Production		Refined	Deliveries to	Refined Stock	Stock Increases or Decreases		
	Primary	Secondary	Production	Customers	End of Period	Blister	Refined	Total
1955								
May	229,774	12,305	251,791	233,645	219,960	— 9,712	+19,125	+ 9,413
June	232,058	11,898	240,499	248,449	209,945	+ 3,416	—10,015	— 6,599
July	167,746	8,279	159,499	149,643	219,643	+16,626	+ 9,698	+26,324
Aug.	195,394	10,138	208,974	200,049	230,022	— 3,441	+10,379	+ 6,938
Sept.	236,949	13,788	248,481	262,118	228,002	+ 2,256	— 2,020	+ 236
Oct.	245,462	11,439	244,255	246,898	227,261	+12,646	— 741	+11,905
Nov.	229,736	9,304	239,963	248,827	218,519	— 1,283	— 8,819	—10,025
Dec.	214,114	11,713	250,349	247,222	221,331	—24,522	+ 1,643	—21,710
1955 Total	2,613,662	133,065	2,728,309	2,744,391	221,331	+18,418	— 8,552	+11,112
1956								
Jan.	233,897	11,250	237,300	242,425	217,315	+ 7,847	— 4,016	+ 3,831
Feb.	228,409	11,355	243,458	236,841	226,686	— 193	+ 9,371	+ 9,178
Mar.	243,676	14,293	258,462	261,814	225,827	— 493	— 859	— 1,352
Apr.	232,986	14,716	254,462	242,244	238,125	— 6,760	+12,298	+ 5,538
May	233,963	18,608	266,551	253,871	249,365	—13,051	+11,240	— 2,740
June	238,814	11,360	251,382	236,714	266,221	+ 1,309	+14,091	+15,130
July	233,383	11,156	240,633	198,800	303,225	+ 3,906	+37,004	+40,919

In U. S. A.

1955								
May	95,042	11,731	135,042	125,169	43,340	.....	+ 581	.....
June	90,645	11,295	130,881	133,739	38,533	.....	— 4,807	.....
July	31,346	7,614	51,182	60,143	36,293	.....	— 2,240	.....
Aug.	67,990	9,364	98,732	90,516	49,350	.....	+13,057	.....
Sept.	96,343	12,739	139,880	145,590	53,625	.....	+ 4,275	.....
Oct.	99,514	10,279	127,865	134,844	49,738	.....	— 3,887	.....
Nov.	94,287	7,888	133,711	142,830	48,736	.....	— 1,002	.....
Dec.	93,186	10,912	145,423	139,512	61,554	.....	+12,818	.....
1955 Total	1,036,702	124,760	1,467,448	1,446,354	61,554	.....	+14,446	.....
1956								
Jan.	96,732	10,353	123,917	130,431	50,016	.....	—11,538	.....
Feb.	89,326	11,697	127,917	139,383	47,053	.....	— 2,963	.....
Mar.	99,681	12,596	144,027	141,590	51,595	.....	+ 4,542	.....
Apr.	95,499	13,780	140,032	139,927	54,887	.....	+ 3,292	.....
May	98,208	17,475	142,445	140,587	53,443	.....	— 1,444	.....
June	98,496	12,471	136,713	131,299	60,671	.....	+ 4,463	.....
July	84,970	10,369	125,401	97,698	87,944	.....	+27,273	.....

Outside U. S. A.*

1955								
May	134,732	574	116,749	108,476	176,620	.....	+18,544	.....
June	141,413	603	108,317	114,710	171,412	.....	— 5,208	.....
July	135,900	765	109,659	89,500	183,350	.....	+11,938	.....
Aug.	127,405	774	110,242	109,533	180,672	.....	— 2,678	.....
Sept.	140,606	1,049	108,601	116,528	174,377	.....	— 6.295	.....
Oct.	145,948	1,160	116,490	112,054	177,523	.....	+ 3,146	.....
Nov.	135,089	1,419	107,097	105,997	169,783	.....	— 7,740	.....
Dec.	120,928	801	104,926	107,710	159,777	.....	—10,006	.....
1955 Total	1,576,960	8,305	1,260,861	1,298,037	159,777	.....	—21,752	.....
1956								
Jan.	137,165	897	113,502	111,994	167,299	.....	+ 7,522	.....
Feb.	138,918	1,808	115,541	97,458	179,633	.....	+12,334	.....
Mar.	143,995	1,697	114,435	120,224	174,232	.....	— 5,401	.....
Apr.	137,487	936	114,430	102,317	183,238	.....	+ 9,006	.....
May	135,755	1,133	124,106	113,284	195,922	.....	+12,684	.....
June	140,318	1,136	114,669	105,415	205,550	.....	+ 9,628	.....
July	148,413	787	115,232	101,012	215,281	.....	+ 9,731	.....

*Excluding Russia, Yugoslavia, Norway, Sweden, Japan, Australia.

Electrolytic Copper

Producers' Price, Del. Valley

Monthly Average Prices

(Cents Per Pound)

	1953	1954	1955	1956
Jan.	24.50	29.88	30.24	43.00
Feb.	25.46	29.88	33.00	44.03
Mar.	31.49	29.93	33.222	46.00
Apr.	30.59	29.98	36.00	46.00
May	29.72	30.00	36.00	46.00
June	29.94	30.00	36.00	46.00
July	29.92	30.00	36.00	41.56
Aug.	29.69	30.00	37.81	....
Sept.	29.75	30.00	43.00	....
Oct.	29.80	30.00	43.00	....
Nov.	29.88	30.00	43.00	....
Dec.	29.88	30.00	43.00	....
Aver.	29.15	29.27	37.522	....

Electrolytic Copper

Custom Smelters' Price, Del. Valley

Monthly Average Prices

(Cents Per Pound)

	1953	1954	1955	1956
Jan.	24.50	29.75	30.48	50.22
Feb.	25.804	29.75	33.00	52.07
Mar.	33.269	29.866	33.667	53.11
Apr.	31.18	29.965	36.00	48.88
May	29.785	30.00	36.00	44.221
June	29.875	30.00	36.00	40.00
July	29.846	30.00	36.00	38.14
Aug.	29.375	30.00	40.14	....
Sept.	29.50	30.00	50.00	....
Oct.	29.606	30.00	45.99	....
Nov.	29.75	30.00	45.84	....
Dec.	29.75	30.00	49.42	....
Aver.	29.35	29.944	39.38	....

Lake Copper

Producers' Price, Delivered

Monthly Average Prices

(Cents Per Pound)

	1953	1954	1955	1956
Jan.	24.625	30.00	30.12	43.00
Feb.	24.625	30.00	33.00	43.783
Mar.	32.00	30.00	33.56	46.00
Apr.	32.23	30.00	36.00	46.00
May	Nom.	30.00	36.00	46.00
June	30.125	30.00	36.00	46.00
July	30.125	30.00	36.00	41.68
Aug.	30.125	30.00	37.46	....
Sept.	30.125	30.00	43.00	....
Oct.	30.125	30.00	43.00	....
Nov.	30.125	30.00	43.00	....
Dec.	30.038	30.00	43.00	....
Aver.	29.47	30.00	37.51	....

Fabricators' Copper Statistics

(In tons of 2,000 pounds)

	Fabricators' Stocks of Refined Cop.	Unfilled Purchases of Refined by Fab. from Producers	Fabricators' Working Stocks	Unfilled Sales by Fabricators to Customers	Actual Copper Consmd. by Fabricators	Excess Fabricators' Stocks Over Orders Bkd.
1950						
Total	290,241	92,372	288,392	313,052	1,438,327	—218,831
1951						
Total	280,402	32,147	295,385	303,050	1,392,111	—285,886
1952						
Total	333,455	32,652	292,157	275,312	1,389,451	—201,362
1953						
Total	380,881	25,022	309,664	170,917	1,375,869	— 74,678
1954						
Jan.	355,632	26,423	307,014	142,588	100,805	— 67,547
Feb.	349,661	26,227	305,670	122,999	94,975	— 52,781
Mar.	341,693	28,836	304,065	123,887	103,796	— 57,423
Apr	341,616	30,677	302,391	124,559	104,943	— 54,667
May	349,796	33,210	305,504	123,039	102,810	— 45,537
June	351,518	43,723	304,833	122,218	104,531	— 31,810
July	370,287	41,104	307,352	130,576	80,751	— 26,537
Aug.	359,474	58,007	302,423	131,514	102,966	— 16,456
Sept.	341,726	50,650	300,603	148,515	106,628	— 56,742
Oct.	330,787	50,240	299,068	135,140	116,232	— 53,181
Nov.	335,315	55,517	301,097	137,076	114,392	— 47,341
Dec.	360,526	58,125	304,619	136,581	99,479	— 22,549
Total	.....	.....	.....	.....	1,232,090	.....
1955						
Jan.	334,105	66,122	302,658	159,016	136,539	— 61,447
Feb.	323,425	75,840	301,597	180,898	118,786	— 83,230
Mar.	311,235	85,859	301,937	187,827	143,544	— 92,670
Apr.	316,575	88,992	304,117	206,308	115,073	—108,868
May	327,343	111,715	309,219	323,279	113,485	—102,440
June	327,696	126,703	309,972	234,578	132,377	— 90,151
July	312,587	165,505	301,048	286,095	75,846	—109,051
Aug.	304,097	150,854	303,089	283,653	97,688	—131,791
Sept.	334,996	133,391	314,111	270,102	113,628	—115,826
Oct.	353,469	135,075	313,048	275,255	115,453	— 99,759
Nov.	373,314	139,855	313,779	283,953	122,332	— 84,563
Dec.	389,974	139,094	314,145	293,264	127,006	— 78,341
Total	.....	.....	.....	.....	1,412,287	.....
1956						
Jan.	376,753	143,815	312,128	305,942	138,711	— 97,502
Feb.	388,823	135,637	319,279	282,314	130,923	— 77,133
Mar.	392,143	140,348	319,056	291,465	135,746	— 78,030
Apr.	413,979	135,071	319,247	266,239	118,839	— 36,436
May	435,083	131,023	318,592	249,352	122,253	— 1,838
June	451,126	114,223	324,970	227,097	111,109	+ 13,282

Scrap Copper Receipts by Custom Smelters and Refineries in United States*

(In Short Tons)

	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
Jan.	7,080	10,172	17,084	15,763	6,640	4,528	6,486	9,859	11,047	14,322
Feb.	5,394	11,890	20,238	12,500	5,153	3,633	10,337	8,490	15,198	14,497
Mar.	9,187	11,954	20,678	13,538	7,912	5,243	19,991	9,738	12,198	15,921
Apr.	13,065	15,125	15,968	12,304	8,553	6,214	16,584	9,004	13,162	17,233
May	14,264	16,357	14,237	8,749	8,458	8,033	10,857	8,687	15,133	20,805
June	9,883	11,178	8,809	20,523	8,628	4,425	10,945	13,309	14,765	14,758
July	8,578	8,370	7,782	10,040	6,642	5,188	9,063	10,260	9,988	12,632
Aug.	8,672	17,081	8,246	10,452	6,113	5,003	7,187	10,100	12,197	.....
Sept. ...	10,611	16,001	10,980	4,903	3,561	4,667	9,042	10,641	15,037	.....
Oct.	8,582	10,864	6,401	9,459	3,336	4,602	10,065	11,662	12,897	.....
Nov.	8,070	7,625	15,347	9,237	3,179	4,724	7,815	10,879	9,865	.....
Dec.	9,164	11,826	10,583	7,178	4,588	6,208	11,476	14,876	13,180	.....
Total	...112,386	147,931	156,303	142,167	71,812	62,870	129,798	127,449	154,714	.....

*As compiled by Copper Institute.

Brass and Bronze Ingot Monthly Shipments

(Net Tons)

The following figures showing the combined shipments of ingot brass and bronze are compiled by the Ingot Brass and Bronze Industry and represent in excess of 95 per cent of the deliveries of the entire industry.

	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
Jan.	29,196	27,841	26,998	19,456	18,874	28,416	28,315	24,423	20,661	25,201	27,736
Feb.	24,580	24,686	22,487	15,026	18,487	27,168	24,211	25,429	19,920	25,849	24,949
Mar. ...	27,176	17,477	24,282	14,550	22,494	31,997	23,890	28,256	23,653	29,713	28,310
Apr.	30,228	24,577	25,177	10,695	22,118	30,472	22,547	25,044	24,746	27,641	25,808
May	27,333	19,525	23,716	11,114	23,643	33,267	21,740	21,660	22,269	23,708	23,437
June	31,349	16,929	24,401	9,696	25,093	33,817	21,274	20,818	22,348	23,141	18,842
July	26,677	16,728	20,456	10,220	21,609	32,016	18,947	19,321	17,074	18,513	17,364
Aug.	27,896	18,589	24,098	14,194	26,689	25,285	21,807	20,156	21,684	27,018	.....
Sept. ...	27,890	19,025	23,641	16,208	28,811	22,285	22,770	21,463	22,464	26,849	.....
Oct.	31,461	22,806	21,559	18,026	32,240	23,124	25,811	22,280	24,080	25,225	.....
Nov.	29,232	21,666	21,731	18,488	31,748	23,644	23,441	21,880	23,061	25,102	.....
Dec.	27,206	23,862	20,954	17,960	28,575	20,987	22,983	20,541	21,274	21,448	.....
Total	...339,724	263,711	279,500	175,643	308,663	322,878	277,736	271,251	263,232	298,406	.....
Aver. ...	28,310	21,976	23,292	14,637	25,297	27,615	23,145	22,604	21,936	24,867	.....

Mine Production of Copper in United States

(U. S. Bureau of Mines)

(In short tons)

	Eastern	Missouri	Western	Total
1953				
Ttl.	38,900	2,374	885,174	926,448
1954				
Nov.	3,660	136	75,412	79,208
Dec.	4,156	137	77,124	81,417
Ttl.	40,302	1,925	798,241	835,472
1955				
Jan.	5,054	175	78,071	83,300
Feb.	5,339	185	77,968	83,492
Mar.	6,655	220	86,894	93,769
Apr.	5,644	190	83,320	89,154
May	4,606	199	86,019	90,824
June	5,192	189	84,011	89,392
July	4,678	169	28,496	33,343
Aug.	5,028	125	62,082	67,235
Sept.	6,928	130	83,213	90,271
Oct.	6,552	195	85,445	92,192
Nov.	6,188	184	84,681	91,053
Dec.	6,758	179	81,638	88,575
Ttl.	68,622	2,140	921,838	992,600
1956				
Jan.	6,674	163	87,682	94,519
Feb.	6,688	164	82,560	89,412
Mar.	7,347	198	90,398	97,943
Apr.	6,821	195	88,594	95,610
May	6,960	191	90,977	98,128

Average Custom Smelters' Scrap Buying Prices

(Cents per pound for carload lots del. consumers' works)

	No. 1 Copper Scrap	No. 2 Copper Scrap	Light Copper Scrap	Refinery Brass*
1954				
Av.	..26.75	25.22	23.69	22.92
1955				
June	.35.57	34.07	32.32	31.61
July	..37.39	35.89	34.04	33.06
Aug.	.39.93	38.43	36.40	34.24
Sept.	.43.88	42.38	40.00	38.21
Oct.	..39.48	37.98	36.69	35.83
Nov	..40.08	38.58	36.33	36.34
Dec.	..42.75	41.25	38.79	38.71
Av.	..37.035	35.535	33.59	32.70
1956				
Jan.	..42.39	40.89	38.42	38.26
Feb.	..43.35	41.85	39.35	38.65
Mar.	..45.77	44.27	41.77	41.02
Apr.	..41.65	40.15	37.65	38.15
May	..36.06	34.56	32.06	32.50
June	..33.32	31.82	29.32	29.03
July	..32.69	31.19	28.69	28.98

*Of dry content for material having a dry copper content in excess of 60%.

Brass Ingot Makers' Scrap Copper Buying Prices

(Average Prices)

(Cents per pound del. refinery for 60,000 lbs. of each grade)

	No. 1 Copper Scrap	No. 2 Copper Scrap	No. 1 Composition	Heavy Yellow Brass
1954				
Av.	..26.59	25.07	20.99	16.24
1955				
May	..33.66	32.16	27.08	24.18
June	.34.79	33.29	27.77	20.63
July	..36.83	35.33	30.15	22.535
Aug.	.39.74	38.24	32.67	23.76
Sept.	.43.88	42.38	35.01	24.96
Oct.	..39.468	37.968	32.22	22.80
Nov.	..40.08	38.58	33.15	22.53
Dec.	..43.58	41.22	34.84	24.22
Av.	..36.63	35.02	29.905	22.35
1956				
Jan.	..42.39	40.89	35.22	24.51
Feb.	..43.35	41.85	34.72	24.79
Mar.	..45.77	44.27	36.46	27.76
Apr.	..41.65	40.15	34.40	24.49
May	..36.06	34.56	29.58	19.89
June	.33.32	31.82	26.37	18.40
July	..32.69	31.19	26.89	18.43

United States Lead Statistics of Primary Refineries

(American Bureau of Metal Statistics)
(In tons of 2,000 lbs.)

	Stock At Beginning	Production Primary & Secondary	Total Supply	Stock At End	Domestic Shipments
1952	25,339	532,778	558,117	43,560	492,091
1953	43,560	533,883	577,443	81,152	488,437
1954					
August	93,030	44,089	137,119	84,429	43,402
September	84,429	47,762	132,191	93,358	30,891
October	93,358	51,276	144,634	95,496	36,307
November	95,496	46,711	142,207	94,387	34,913
December	94.387	46,506	140,893	92,719	37,017
Total	.....	551,618	632,770	.....	475,551
1955					
January	92,719	44,780	137,499	84,882	40,451
February	84,882	40,173	125,055	64,938	46,645
March	64,938	50,308	115,246	59,881	42,381
April	59,881	50,274	110,155	54,956	44,878
May	54,956	45,435	100,391	50,947	46,130
June	50,947	48,150	99,097	44,665	44,985
July	44,665	23,850	68,515	39,856	26,547
August	39,856	36,912	76,768	34,111	41,469
September	34,111	50,453	84,564	30,753	46,250
October	30,753	53,747	84,500	29,913	52,062
November	29,913	52,623	82,536	28,855	51,370
December	28,855	50,448	79,303	31,089	48,171
Total	.....	547,153	639,872	.....	531,339
1956					
January	31,089	51,306	82,395	32,469	49,746
February	32,469	49,475	81,944	41,450	39,411
March	41,450	54,174	95,624	52,089	39,344
April	53,089	52,976	105,065	53,958	44,986
May	53,958	47,961	101,919	50,460	40,703
June	50,460	47,367	97,827	45,951	41,458

In instances where the figures are not in balance it is due to shipments to other than domestic consumers.

Industrial Classification of Domestic Lead Shipments

(American Bureau of Metal Statistics) (In tons of 2,000 lbs.)

	Cable	Amm.	Foil	Batt'y	Brass Making	Sundries	Jobbers	Unclassified
1950	66,646	28,854	3,304	93,297	6,374	60,118	10,450	230,594
1951	70,149	32,099	2,063	75,337	5,583	48,248	3,550	259,155
1952	74,616	30,809	1,374	77,238	5,160	50,943	5,671	246,283
1953								
Dec.	6,220	1,896	72	3,985	206	3,350	402	18,876
Total	76,283	34,415	2,136	80,339	5,716	55,936	6,390	227,222
1954								
Jan.	6,273	2,955	....	5,077	964	5,051	628	16,160
Feb.	6,040	2,170	....	5,890	798	3,682	254	17,717
Mar.	7,620	2,405	252	6,663	149	6,818	492	23,438
Apr.	6,207	2,550	361	6,341	308	5,194	342	25,798
May	6,030	2,310	276	5,635	250	4,621	1,020	20,041
June	6,116	3,700	122	5,711	406	6,525	1,114	23,293
July	4,000	1,500	...	6,690	415	4,121	861	19,608
Aug.	8,799	3,358	146	6,111	838	5,377	1,152	17,621
Sept.	4,602	1,653	564	4,110	20	4,667	851	14,424
Oct.	6,142	1,970	657	4,172	383	4,581	829	17,573
Nov.	5,816	3,795	333	3,898	520	3,202	721	16,628
Dec.	7,707	1,880	100	5,790	141	3,530	906	16,963
Total	75,412	30,246	2,811	66,088	5,192	57,369	9,170	229,264
1955								
Jan.	7,044	1,570	36	5,158	213	4,451	857	21,122
Feb.	5,869	3,200	348	6,758	289	4,796	1,013	24,373
Mar.	6,538	2,340	614	6,897	240	3,807	1,167	20,778
Apr.	5,909	2,625	201	6,533	463	5,178	1,234	22,735
May	6,145	2,950	251	8,127	321	4,435	1,145	22,756
June	6,623	950	50	6,833	290	5,175	1,293	23,816
July	2,313	150	307	4,365	100	3,763	946	14,603
Aug.	5,772	2,800	210	4,794	290	3,741	1,230	22,632
Sept.	6,552	2,295	415	7,794	354	4,711	1,149	22,980
Nov.	6,606	2,433	70	13,875	387	3,795	874	23,330
Dec.	6,275	3,260	35	7,508	449	4,289	839	25,516
Total	72,418	27,599	2,622	88,461	3,960	52,994	13,034	270,251
1956								
Jan.	7,777	3,075	200	6,555	290	8,538	917	22,394
Feb.	5,974	2,435	384	5,983	275	3,592	871	19,897
Mar.	6,786	1,300	101	4,903	321	3,915	1,331	20,687
Apr.	6,744	2,950	310	4,839	260	3,522	1,376	24,985
May	6,490	2,825	...	5,027	131	3,513	964	21,753
June	8,502	2,150	...	4,167	186	3,645	1,021	21,787

Lead Prices at New York

(Common Grade)
Monthly Average Prices
(Cents per pound)

	1953	1954	1955	1956
Jan.	14.192	13.26	15.00	16.16
Feb.	13.50	12.82	15.00	16.00
Mar.	13.404	12.94	15.00	16.00
Apr.	12.64	13.91	15.00	16.00
May	12.75	14.00	15.00	16.00
June	13.413	14.11	15.00	16.00
July	13.683	14.00	15.00	16.00
Aug.	14.00	14.06	15.00	....
Sept.	13.74	14.60	15.12	....
Oct.	13.50	14.975	15.50	....
Nov.	13.50	15.00	15.50	....
Dec.	13.50	15.00	15.56	....
Av.	13.485	14.06	15.14	....

Lead Sheet Prices

(To Jobbers, Full Sheets)
Monthly Average Prices
(Cents per pound)

	1953	1954	1955	1956
Jan.	19.192	18.26	20.00	21.16
Feb.	18.50	17.82	20.00	21.00
Mar.	18.404	17.94	20.00	21.00
Apr.	17.64	18.91	20.00	21.00
May	17.75	19.00	20.00	21.00
June	19.413	19.11	20.00	21.00
July	18.683	19.00	20.00	21.00
Aug.	19.00	19.06	20.00	....
Sept.	18.74	19.60	20.12	....
Oct.	18.50	19.975	20.50	....
Nov.	18.50	20.00	20.50	....
Dec.	18.50	20.00	20.56	....

Battery Shipments

The following table shows replacement battery shipments in the United States as compiled by the Business Information Division of Dun & Bradstreet, Inc., for the Association of American Battery Manufacturers.

(In thousands of units)

	1953	1954	1955	1956
Jan.	1,571	1,788	1,478	2,005
Feb.	1,162	1,422	1,647	1,305
Mar.	1,202	1,194	1,321	1,313
Apr.	1,245	1,150	1,281	1,331
May	1,455	1,391	1,572	1,714
June	2,004	1,834	1,794	1,760
July	2,528	2,288	2,024	....
Aug.	2,707	2,481	2,774	....
Sept.	2,852	2,728	3,039	....
Oct.	2,825	2,667	3,036	....
Nov.	2,173	2,410	2,622	....
Dec.	1,890	1,796	2,556	....
Total	23,614	23,149	25,147	.....

Lead Stocks at Primary U. S. Smelters and Refiners

(American Bureau of Metal Statistics)
(In tons of 2,000 lbs.)

	In ore and matte and in process at smelters	— In base bullion (lead content) — At smelters & refineries	In transit to refineries	In process at refineries	Refined pig lead	Anti-monial lead	Total Stocks
1954							
May 1	67,270	14,624	2,715	28,257	88,464	11,977	213,307
June 1	64,103	10,906	1,348	27,105	97,420	11,882	212,764
July 1	61,669	12,241	3,660	26,046	94,828	9,798	208,242
Aug. 1	63,093	17,196	2,592	30,301	80,820	12,210	206,212
Sept. 1	62,851	18,688	2,903	29,792	72,150	12,279	198,663
Oct. 1	63,731	18,771	4,155	29,024	79,190	14,168	209,039
Nov. 1	59,660	17,095	3,265	28,373	80,650	14,846	203,889
Dec. 1	57,452	16,888	2,570	27,816	79,814	14,573	199,113
1955							
Jan. 1	62,074	18,170	1,723	27,164	77,930	14,789	201,850
Feb. 1	59,303	15,485	3,133	29,393	69,980	14,902	192,196
Mar. 1	64,492	17,741	3,781	28,467	52,734	12,204	179,419
Apr. 1	57,577	20,063	2,309	28,564	47,496	12,385	168,394
May 1	59,686	17,468	3,496	25,373	43,207	11,749	160,979
June 1	59,632	17,705	1,941	27,979	39,892	11,055	158,204
July 1	58,182	14,707	2,941	30,579	34,432	10,233	151,074
Aug. 1	65,476	10,065	1,303	26,792	30,077	9,779	143,492
Sept. 1	75,057	17,183	3,744	29,660	26,859	7,252	159,755
Oct. 1	70,628	19,083	4,217	28,424	23,292	7,461	153,105
Nov. 1	71,257	20,682	4,276	28,596	21,828	8,085	154,724
Dec. 1	64,109	20,232	4,377	27,486	19,592	9,263	145,059
1956							
Jan. 1	71,812	16,532	3,764	27,625	21,196	9,893	150,822
Feb. 1	70,690	19,082	1,764	25,632	24,080	8,389	149,637
Mar. 1	71,023	16,406	2,583	27,519	32,355	9,095	158,981
Apr. 1	72,358	15,655	2,152	28,065	41,800	10,289	170,319
May 1	74,837	15,500	2,718	24,181	43,268	10,690	171,194
June 1	78,987	15,477	2,475	26,682	39,558	10,902	174,081
July 1	81,796	15,837	4,423	28,505	36,499	9,452	176,512

Receipts of Lead in Ore and Scrap

By U. S. Smelters (a)

(American Bureau of Metal Statistics) (In tons of 2,000 lbs.)

	Receipts of lead in ore			Receipts of lead in scrap etc. (b)	Total receipts in ore, & scrap
	United States	Foreign	Total		
1952 Total	405,990	98,276	504,266	41,845	546,111
1953 Total	351,183	155,788	506,971	42,994	549,965
1954					
July	26,975	14,984	41,959	3,742	45,701
August	28,835	12,820	41,655	4,060	45,715
September	25,244	20,807	46,051	4,450	50,501
October	26,884	12,561	39,455	5,134	44,579
November	29,107	8,622	37,729	5,628	43,357
December	29,646	16,020	45,666	4,457	50,123
Total	336,291	158,081	494,372	49,864	544,236
1955					
January	28,767	11,502	40,269	3,509	43,778
February	27,456	17,400	44,856	2,738	47,594
March	30,056	11,104	41,160	3,291	44,451
April	28,707	16,347	45,054	3,249	48,303
May	28,511	13,377	41,888	4,879	48,767
June	28,273	14,667	42,940	4,509	47,449
July	23,027	3,826	26,853	649	27,502
August	30,249	11,859	42,108	3,942	46,050
September	29,377	14,881	44,258	3,623	47,881
October	30,073	20,845	50,918	5,655	56,573
November	27,736	13,022	40,758	3,802	44,560
December	29,363	24,136	53,499	3,150	56,649
Total	341,595	172,966	514,561	42,996	557,557
1956					
January	27,184	15,704	42,888	6,346	49,234
February	28,569	16,528	45,097	4,577	49,674
March	31,568	17,904	49,472	3,989	53,461
April	31,786	15,224	47,010	4,252	51,262
May	32,715	18,476	51,191	4,711	55,902
June	31,546	16,251	47,797	4,541	52,338

(a) Receipts of lead in ore are computed on the basis of recoverable lead. Owing to the estimational factor in this, which is probably on the low side, and also to the possibility that some lead receipts may escape attention, these monthly totals probably underrun the actual production of pig lead. (b) Inclusive only of scrap smelted in connection with ore, plus some scrap received by primary refiners.

N. Y. Lead Price Changes

(Effective Date)

1949		1953	
Nov.	16....12.50	Jan.	7....14.50
Nov.	21....12.00	Jan.	12....14.00
1950		Feb.	2....13.50
Mar.	9....11.00	Mar.	4....13.00
Mar.	14....10.50	Mar.	10....13.50
Apr.	20....10.75	Apr.	7....13.00
Apr.	26....11.00	Apr.	16....12.50
May	4....11.25	Apr.	21....12.00
May	10....11.50	Apr.	29....12.50
May	11....12.00	May	18....12.75
June	23....11.50	May	19....13.00
1951		May	26....13.15
June	28....11.00	June	11....13.50
July	12....11.50	July	20....13.75
July	13....12.00	July	23....14.00
Aug.	15....13.00	Sept.	16....13.50
Aug.	21....14.00	1954	
Sept.	1....15.00	Jan.	18....13.00
Sept.	8....16.00	Feb.	18....12.50
Oct.	2..**19.00	Mar.	9....12.75
Oct.	31....17.00	Mar.	10....13.00
1952		Mar.	26....13.25
Apr.	29....18.00	Mar.	29....13.50
May	2....17.00	Apr.	1....13.75
May	12....15.00	Apr.	12....14.00
June	23....15.50	June	2....14.25
June	24....16.00	June	15....14.00
Oct.	7....15.00	Aug.	25....14.25
Oct.	14....14.00	Sept.	7....14.50
Oct.	22....13.50	Sept.	15....14.75
Nov.	3....14.00	Oct.	4....14.875
Nov.	10....14.20	Oct.	5....15.00
Nov.	11....14.50	1955	
Nov.	20....14.25	Oct.	23....15.00-15.50
Nov.	24....14.00	Oct.	26....15.50
Dec.	22....14.25	Dec.	29....16.00
Dec.	29....14.50	1956	
Dec.	31....14.75	Jan.	4....16.50
		Jan.	13....16.00

*OPA Ceiling. ‡Returned to OPA Ceiling. **OPS Ceiling.

Antimonial Lead Stocks at Primary Refineries

(A. B. M. S.)

(In tons of 2,000 lbs.)

End of:	1953	1954	1955	1956
Jan.	11,572	14,691	14,902	8,389
Feb.	10,736	14,798	12,204	9,095
Mar.	11,484	11,985	12,385	10,289
Apr.	11,248	11,977	11,740	10,690
May	10,764	11,882	11,055	10,902
June	14,335	9,798	10,233	9,452
July	14,247	12,210	9,779	.....
Aug.	14,748	12,279	7,252	.....
Sept.	15,877	14,168	7,461	.....
Oct.	15,742	14,846	8,085	.....
Nov.	16,498	14,573	9,263	.....
Dec.	16,116	14,789	9,893	.....

Antimonial Lead Production by Primary Refineries

(A. B. M. S.)

(In tons of 2,000 lbs.)

End of:	1953	1954	1955	1956
Jan.	2,937	3,768	4,529	5,045
Feb.	3,682	4,257	4,777	5,888
Mar.	5,353	4,475	6,202	5,526
Apr.	5,027	4,470	5,343	5,818
May	6,497	4,373	4,737	5,405
June	9,270	3,796	4,792	4,456
July	5,259	5,991	1,153	....
Aug.	4,668	6,455	2,946	....
Sept.	5,509	5,869	6,650	....
Oct.	5,100	5,532	8,016	....
Nov.	5,400	5,364	7,985	....
Dec.	3,060	5,255	6,907	....
Total	61,762	59,875	64,037	.....

U. S. Lead Consumption

(Bureau of Mines — In Short Tons)

Metal Products	1956 Jan.-May	1956 Apr.	1956 May
Ammunition	19,999	4,028	4,274
Bearing metals	12,443	2,519	2,353
Brass and bronze	12,718	2,514	2,218
Cable covering	57,375	11,015	12,454
Calking lead	23,232	5,853	4,326
Casting metals	5,175	907	938
Collapsible tubes	5,440	1,127	967
Foil	1,695	263	558
Pipes, traps and bends	11,242	2,083	2,241
Sheet lead	13,117	2,386	2,553
Solder	31,229	6,319	6,338
Storage battery grids, posts, etc.	76,677	13,923	15,419
Storage battery oxides	72,330	13,399	14,586
Terne metal	603	176	83
Type metal	9,060	1,750	1,834
Total	352,335	68,262	71,142
Pigments:			
White lead	6,953	1,543	1,561
Red lead and litharge	33,540	6,018	6,441
Pigment colors	6,035	1,191	1,315
Other†	3,352	676	535
Total	49,880	9,428	9,852
Chemicals:			
Tetraethyl lead	79,681	15,218	16,898
Misc. chemicals	680	73	107
Total	80,361	15,291	17,005
Misc. Uses:			
Annealing	2,267	402	392
Galvanizing	754	169	174
Lead plating	390	62	59
Weights & ballast	2,369	455	527
Total	5,780	1,088	1,152
Other Uses Unclassified	6,735	1,379	1,073
Total Reported	*495,091	*95,448	*100,224
Estimated unreported consumption	5,000	1,000	1,000
Grand total	500,100	96,400	101,200
Daily average‡	3,290	3,213	3,265

* Includes lead content of scrap used directly in fabricated products.

† Includes lead content of leaded zinc oxide production.

‡ Based on number of days in month without adjustment for Sundays or holidays.

U. K. Lead Consumption

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 pounds)

	1954	1955	1956
Jan.	25,786	29,062	31,012
Feb.	25,837	28,926	30,125
Mar.	29,442	33,225	30,099
Apr.	25,820	28,656	28,186
May	28,637	31,092	29,752
June	28,574	32,627	31,501
July	25,968	26,994	.....
Aug.	25,671	26,954	.....
Sept.	30,631	34,291	.....
Oct.	30,123	34,121	.....
Nov.	30,142	34,820	.....
Dec.	28,840	29,689	.....
Total	335,887	370,794	.....

American Antimony

Monthly Average Prices in bulk, f. o. b. Laredo

(Cents per lb. in ton lots)

	1953	1954	1955	1956
Jan.	34.50	28.50	28.50	33.00
Feb.	34.50	28.50	28.50	33.00
Mar.	34.50	28.50	28.50	33.00
Apr.	34.50	28.50	28.50	33.00
May	34.50	28.50	28.50	33.00
June	34.50	28.50	28.50	33.00
July	34.50	28.50	28.50	33.00
Aug.	**34.50**	**28.50**	**30.66**	....
Sept.	**34.50**	**28.50**	**33.00**	....
Oct.	**34.50**	**28.50**	**33.00**	....
Nov.	**33.68**	**28.50**	**33.00**	....
Dec.	**28.50**	**28.50**	**33.00**	....
Av.	**33.93**	**28.50**	**30.18**	....

Lead Imports and Exports by Principal Countries

(A.B.M.S.)

Reported in pigs, bars, etc.; metric tons except where otherwise noted.

IMPORTS

	1956 Mar.	1956 Apr.	1956 May
U. S.† (s.t.)	16,052	23,619	21,045
Belgium	862	...	...
Denmark	168	903	651
France	2,501	4,435	6,205
Italy*	1,088	...	...
Netherlands	2,721	4,522	...
Norway	212	712	...
Sweden	1,224	1,449	...
Switzerland	563	788	1,369
U. K. (l.t.)	17,512	7,623	12,855
India‡ (l.t.)	1,228	1,559	...

EXPORTS

U. S.† (s.t.)	725	...	...
Canada (s.t.)	4,007	7,636	7,214
Belgium	5,491	...	...
Denmark	61	199	172
France	1,781	1,045	654
Netherlands	193	284	...
Switzerland	2	20	...
Northern Rhodesia‡ (l.t.)	972	1,480	...
Australia‡ (l.t.)	10,547	...	...

† Refined.

* Lead alloys.

‡ British Bureau of Non-Ferrous Metal Statistics.

French Lead Imports

(American Bureau of Metal Statistics)

(In Metric Tons)

	1956 Jan.-May	1956 Apr.	1956 May
Ore (gross weight)	44,712	9,522	6,516
Greece	2,227	...	...
Italy	787	...	...
Algeria	1,017	886	...
Fr. Morocco	36,677	8,636	5,516
Fr. Eq. Africa	3,031	...	1,000
Tunisia	973	...	...
Non-argentiferous	23,960	4,435	6,205
Belgium	1,137	311	735
Germany (W.)	1,725	525	525
Algeria	45	9	1
Fr. Morocco	9,528	1,627	2,045
Tunisia	11,473	1,562	2,899
Other countries	52	1	...
Antimonial lead	813	...	331

Consumers' Lead Stocks, Receipts and Consumption

(Bureau of Mines — In Short Tons)

	Stocks Apr. 30, 1956	Net Receipts in May	Consumed in May	Stocks May 31, 1956
Soft lead	79,487	59,047	63,883	74,651
Antimonial lead	41,583	30,832	26,580	45,835
Lead in alloys	8,412	5,127	4,417	9,122
Lead in copper-base scrap	1,680	1,615	1,660	1,635
Total	131,162	96,621	*96,540	131,243

* Excludes 3,206 tons of lead which went directly from scrap to fabricated products and 478 tons of lead contained in leaded zinc oxide production.

Consumption of Lead by Class of Product

(Bureau of Mines — In Short Tons)

MAY

	Soft lead	Antimonial lead	Lead in alloys	Lead in copper-base scrap	Total
Metal products	35,841	26,057	4,400	1,660	67,958
Pigments	9,353	21	...	...	9,374
Chemicals	16,990	15	...	...	17,005
Miscellaneous	773	379	...	...	1,152
Unclassified	926	108	17	...	1,051
Total	63,883	26,580	4,417	1,660	*96,540

* Excludes 3,206 tons of lead which went directly from scrap to fabricated products and 478 tons of lead contained in leaded zinc oxide production.

U. K. Lead Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

	1956 Jan.-May	1956 Apr.	1956 May
(Gross Weight)			
Lead and lead alloys	60,386	7,623	12,855
Australia	33,301	3,250	7,258
Canada	15,680	2,053	4,277
Belgium	3,610	400	700
Yugoslavia	400	50	...
United States	901	...	...
Peru	3,000	1,300	500
Other countries	3,494	570	120

Mine Production of Zinc

Mine Production of Lead

Mine Production of Gold

Domestic Zinc Statistics

American Zinc Institute

Commencing with January, 1948, all regularly operating U. S. primary and secondary smelters are included in this report. Production from foreign ores also is included.

(Tons of 2,000 lbs.)

	Stock Beginning	Production	Shipments: Domestic	Shipments: Export & Drawback	Shipments: Gov't Acc't	Shipments: Total	Stock at End	Unfilled Orders at End	Daily Avg. Prod.
1950 Tl.	94,221	910,354	849,246	18,189	128,256	995,691	8,884	74,795	2,494
1950 Mo. Avg.		75,863	70,770	1,516	10,688	82,974			
1951 Tl.	8,884	931,833	836,800	32,067	39,949	918,816	21,901	50,509	2,553
1951 Mo. Avg.		77,653	69,733	3,506	3,329	76,568			
1952 Tl.	21,901	961,430	803,343	56,202	36,626	896,171	87,160	45,264	2,627
1952 Mo. Avg.		80,119	66,945	4,683	3,052	74,681			
1953									
Dec.	165,623	79,116	55,487	6,282	2,127	63,896	180,843	35,466	2,552
Total	.....	971,191	818,850	16,326	42,332	877,508	.....	.....	2,661
Monthly Avg.		80,933	68,238	1,361	3,528	73,126			2,661
1954									
Feb.	198,712	68,020	57,781	7,179	1,778	66,738	199,994	28,943	2,429
Mar.	199,994	71,186	66,929	1,703	1,448	70,080	201,100	31,702	2,296
Apr.	201,100	70,255	67,512	977	2,489	70,616	200,740	31,702	2,342
May	200,740	73,646	61,859	670	2,037	64,566	209,828	38,624	2,376
June	209,828	71,466	72,257	2,297	5,685	80,239	201,055	33,100	2,385
July	201,124	70,749	59,157	1,475	13,214	73,846	198,027	38,899	2,282
Aug.	198,027	71,810	58,188	1,525	16,871	76,584	193,253	41,059	2,316
Sept.	193,253	60,137	64,548	1,072	12,265	77,885	175,505	48,818	2,004
Oct.	175,505	67,047	78,867	1,468	10,080	90,415	152,137	51,559	2,163
Nov.	152,137	80,119	77,074	2,477	18,066	97,617	134,639	44,042	2,671
Dec.	134,639	85,166	75,105	3,405	17,218	95,728	124,077	45,862	2,747
Total	.....	868,242	787,922	27,929	108,957	924,808			
Monthly Avg.		72,353	65,660	2,327	9,080	77,067			2,379
1955									
Jan.	124,277	86,076	70,863	2,644	19,694	93,201	117,152	57,421	2,777
Feb.	117,152	78,977	80,016	3,743	16,205	99,964	96,165	54,527	2,820
Mar.	96,165	89,179	79,720	1,828	12,959	94,507	90,837	60,057	2,877
Apr.	90,837	83,786	89,589	1,967	8,488	100,044	74,597	65,127	2,793
May	74,579	86,177	83,336	3,802	10,434	97,572	63,184	70,087	2,780
June	63,184	84,458	92,212	1,492	5,335	99,039	48,603	57,231	2,815
July	48,603	84,400	76,812	862	4,039	81,713	51,290	64,056	2,738
Aug.	51,290	84,874	87,042	885	2,153	90,080	46,084	73,632	2,738
Sept.	46,084	83,448	83,664	1,274	2,427	87,365	42,167	52,278	2,781
Oct.	42,167	89,449	85,770	36	1,942	87,748	43,868	61,746	2,886
Nov.	43,868	86,616	91,585	280	1,561	93,426	38,058	64,560	2,921
Dec.	38,058	92,578	87,010	684	1,963	89,657	40,979	72,908	2,986
Total	.....	1,031,018	1,007,619	19,496	87,200	1,114,316	.....	.....	....
Monthly Avg.		85,918	83,968	1,625	7,267	92,860			2,825
1956									
Jan.	40,979	90,313	87,723	1,084	1,155	89,962	41,330	60,717	2,918
Feb.	41,330	86,329	84,727	317	2,782	87,826	39,833	45,255	2,977
Mar.	39,833	91,690	84,204	460	6,821	91,485	40,038	53,070	2,958
Apr.	40,038	88,664	74,789	1,437	4,570	80,795	47,907	46,106	2,955
May	47,907	81,238	69,085	287	10,196	69,568	59,577	34,003	2,620
June	59,577	78,154	52,703	539	15,085	68,327	69,704	45,921	2,615
July	69,704	83,080	34,219	811	14,501	49,531	103,253	53,559	2,680

U. S. Consumption of Slab Zinc

Bureau of Mines

By Industries (Short Tons)

	Galvanizers	Die Casters	Brass products	Rolled zinc	Zinc oxide & other	Total
1949 Total	348,544	197,387	84,257	55,100	17,643	702,931
1950 Total	434,094	281,385	136,451	67,779	27,656	947,365
1951 Total	386,373	266,442	141,456	64,000	28,738	887,009
1952 Total	375,563	236,022	155,311	51,508	30,885	849,289
1953 Total	403,162	305,346	177,301	53,784	38,037	977,636
1954						
March	31,298	26,549	9,026	4,246	2,520	73,639
April	32,970	24,176	8,181	3,933	2,395	71,655
May	32,935	22,081	8,450	3,848	3,028	70,342
June	34,827	23,534	8,860	4,214	2,880	74,665
July	33,897	17,214	6,135	3,006	2,712	63,314
August	38,225	19,891	8,349	4,030	2,684	73,529
September	37,591	20,980	8,505	3,153	3,037	73,616
October	36,407	26,051	9,501	4,181	3,055	79,545
November	34,212	30,572	10,573	3,969	2,785	82,461
December	32,263	31,781	10,961	3,350	2,987	81,342
Total	398,599	286,817	107,293	45,979	33,342	876,130
1955						
January	32,638	32,863	12,313	3,754	3,151	84,719
February	31,601	31,254	10,690	3,912	2,745	80,202
March	37,648	37,682	12,718	4,635	3,305	95,988
April	36,136	36,628	11,034	3,833	3,181	90,812
May	37,471	36,926	12,404	4,203	3,409	94,413
June	37,874	32,821	13,305	5,012	3,227	92,239
July	33,433	23,910	7,017	2,832	2,897	70,589
August	38,317	30,168	10,244	5,431	3,027	87,687
September	39,181	31,804	12,672	4,185	3,507	91,849
October	40,030	35,136	13,961	4,714	3,596	97,940
November	38,116	38,616	13,455	3,952	3,636	98,275
December	37,249	36,982	15,003	3,900	3,621	96,755
Total	439,694	404,790	144,816	50,363	39,302	1,081,468
1956						
January	38,148	36,554	13,097	4,442	3,665	95,906
February	37,702	31,274	12,678	3,883	3,325	88,862
March	38,662	31,332	12,889	4,433	3,566	90,882
April	37,092	29,226	12,635	4,010	3,359	86,322
May	38,064	26,003	12,218	3,431	1,260	80,976

Prime Western Zinc Prices

(Cents per pound)

(In Tons of 2,240 Pounds)

	1953	1954	1955	1956
Jan.	12.596	9.76	11.50	13.46
Feb.	11.48	9.375	11.50	13.50
Mar.	11.024	9.66	11.50	13.50
Apr.	11.00	10.25	11.93	13.50
May	11.00	10.29	12.00	13.50
June	11.00	10.96	12.25	13.50
July	11.00	11.00	12.50	13.50
Aug.	11.00	11.00	12.50	....
Sept.	10.18	11.44	12.96	....
Oct.	10.00	11.50	13.02	....
Nov.	10.00	11.50	13.00	....
Dec.	10.00	11.50	13.00	....
Av.	10.857	10.69	12.305	....

High Grade Zinc Prices

(Delivered)

N. Y. Monthly Averages

(Cents per pound)

	1953	1954	1955	1956
Jan.	13.946	11.11	12.85	14.81
Feb.	12.83	10.725	12.85	14.85
Mar.	12.379	11.01	12.85	14.85
Apr.	12.35	11.60	13.28	14.85
May	12.35	11.64	13.35	14.85
June	12.35	12.31	13.60	14.85
July	12.47*	12.35	13.85	14.85
Aug.	12.60	12.35	13.85	....
Sept.	11.53	12.79	14.31	....
Oct.	11.35	12.85	14.37	....
Nov.	11.35	12.85	14.35	....
Dec.	11.35	12.85	14.35	....
Av.	12.207	12.04	13.655	....

*East of Continental Divide.

U. K. Zinc Consumption

British Bureau of Non-Ferrous Metal Statistics

(In Tons of 2,240 Pounds)

	1954	1955	1956
Jan.	25,615	29,192	29,779
Feb.	25,286	28,814	29,568
Mar.	29,001	33,451	28,650
Apr.	26,084	27,741	25,348
May	27,551	29,237	27,922
June	29,665	31,467	26,650
July	23,012	23,695	.....
Aug.	22,102	23,261	.....
Sept.	30,413	30,080	.....
Oct.	28,543	29,460	.....
Nov.	27,901	31,516	.....
Dec.	29,344	28,683	.....
Total	324,517	346,597	.....

Mine Production of Zinc in United States

(U. S. Bureau of Mines)

(In short tons)

	Eastern States	Central States	Western States	Total U.S.*
1952				
Total	185,939	94,410	385,652	666,001
1953				
Total	183,612	57,300	293,818	534,730
1954				
Dec.	12,448	5,687	20,900	39,035
Total	166,487	63,100	234,942	464,539
1955				
Jan.	13,008	5,661	21,878	40,547
Feb.	13,124	5,075	21,437	39,636
Mar.	14,679	6,173	24,840	45,692
Apr.	13,767	6,074	23,436	43,277
May	13,563	5,842	25,200	44,605
June	13,840	5,652	24,044	43,536
July	13,400	5,340	22,643	41,383
Aug.	14,426	5,868	22,339	42,633
Sept.	13,830	5,834	22,490	42,154
Oct.	13,332	5,339	22,496	41,167
Nov.	12,676	5,532	21,347	39,555
Dec.	12,644	5,250	21,721	39,615
Total	162,289	67,640	273,871	503,800
1956				
Jan.	13,830	5,017	21,701	40,548
Feb.	13,975	5,236	23,460	42,671
Mar.	15,058	5,740	27,310	48,108
Apr.	14,172	5,098	25,687	44,957
May	14,834	5,471	27,133	47,438
June	13,730	5,163	25,640	44,533

*Includes Alaskan output in some months.

Mine Production of Lead in United States

(U. S. Bureau of Mines)

(In short tons)

	Eastern States	Central States	Western States	Total U.S.*
1951				
Ttl.	7,426	152,258	230,723	390,428
1952				
Ttl.	11,252	150,302	228,607	390,161
1953				
Ttl.	9,970	136,650	188,776	335,412
1954				
Ttl.	8,608	138,940	169,804	317,352
1955				
Jan.	861	12,300	14,667	27,828
Feb.	792	12,077	14,558	27,427
Mar.	887	13,187	17,241	31,315
Apr.	940	12,417	15,329	28,686
May	987	12,037	15,908	28,932
June	900	11,918	15,609	28,427
July	828	10,925	14,030	25,783
Aug.	821	12,109	13,883	26,813
Sept.	906	11,676	14,294	26,876
Oct.	924	11,635	15,005	27,564
Nov.	762	11,731	13,482	25,975
Dec.	771	13,628	13,403	27,802
Ttl.	10,379	145,640	177,409	333,409
1956				
Jan.	780	11,633	14,113	26,526
Feb.	1,006	12,100	14,648	27,754
Mar.	1,152	13,232	16,667	31,051
Apr.	978	11,948	16,699	29,625
May	991	12,497	16,360	29,848
June	862	11,541	16,420	28,823

*Includes Alaskan output in some months.

Mine Production of Gold in United States

(U. S. Bureau of Mines)

(In fine ounces)

	Eastern States	Western States	Alaska*	Total
1952				
Ttl.	1,948	1,650,660	233,428	1,886,036
1953				
Ttl	1,529	1,689,668	273,479	1,964,676
1954				
Ttl.	1,731	1,577,216	252,794	1,831,741
1955				
Jan.	208	138,773	58	139,039
Feb.	156	134,363	72	134,591
Mar.	203	147,862	2,674	150,739
Apr.	162	145,103	15	145,280
May	144	147,595	7,287	155,026
June	156	139,993	20,668	160,817
July	140	92,322	39,661	132,123
Aug.	171	119,327	40,931	160,429
Sept.	170	139,811	52,153	192,134
Oct.	182	140,812	43,486	184,480
Nov.	168	144,837	35,530	180,535
Dec.	166	143,827	5,000	148,993
Ttl.	2,026	1,634,625	247,535	1,884,186
1956				
Jan.	121	132,919	1,977	135,017
Feb.	154	130,264	866	131,284
Mar.	198	134,331	62	134,591
Apr.	156	136,360	522	137,038
May	175	140,040	4,130	144,345

*Alaska totals based on mint and smelter receipts.

Mine Production of Recoverable Silver in United States

(U. S. Bureau of Mines)

(In Fine Ounces)

	Eastern States	Missouri	Western States	Alaska*	Total
1953 Total	158,707	223,500	36,354,685	39,111	36,776,003
1954 Total	142,180	283,600	36,121,368	35,140	36,582,288
1955					
March	15,987	39,770	3,570,772	413	3,626,942
April	10,540	36,590	3,238,813	1	3,285,944
May	13,086	35,539	3,381,060	1,062	3,430,747
June	13,592	35,350	3,033,664	2,591	3,085,197
July	9,997	32,910	2,331,064	5,098	2,379,069
August	12,360	38,100	2,723,552	5,477	2,779,489
September	11,517	37,180	2,927,151	6,954	2,982,802
October	15,152	35,540	3,145,297	6,704	3,202,693
November	12,476	36,040	2,963,360	4,735	3,016,611
December	11,831	37,556	2,849,045	750	2,899,182
Total	159,038	438,000	36,103,723	33,804	36,734,565
1956					
January	4,664	30,880	2,869,878	316	2,911,551
February	12,252	32,430	2,967,837	82	3,012,601
March	16,536	34,370	3,243,598	11	3,294,515
April	6,918	32,050	3,212,308	61	3,251,337
May	13,870	33,300	3,065,881	545	3,113,596

*Alaska totals based on mint and smelter receipts.
**Includes a total of 3,708 oz. from Illinois.

U. S. Silver Production*

(A.B.M.S.)

(In thousands of ounces; commercial bars, 0.999 fine, and other refined forms)

	Dom.†	For.	Total
1952 Total	40,245	36,653	76,898
1953 Total	34,697	37,764	72,461
1954			
December	3,169	3,453	6,622
Total	38,059	39,422	77,481
1955			
January	3,416	3,125	6,541
February	2,753	2,851	5,604
March	3,560	2,780	6,340
Apr.	3,068	2,896	5,964
May	3,075	2,224	5,299
June	3,089	3,134	6,223
July	596	930	1,526
August	2,005	1,669	3,674
September	2,840	2,855	5,695
October	2,432	3,889	6,321
November	3,087	2,775	5,862
December	3,180	3,652	6,832
Total	33,101	32,780	65,881
1956			
January	3,249	4,159	7,408
February	3,615	4,033	7,648
March	3,790	3,550	7,340
April	2,898	3,191	6,089
May	2,905	3,709	6,614
June	2,501	2,248	4,749

* The separation between silver of foreign and domestic origin on the basis of refined bars and other refined forms is only approximate.
† Includes purchases of crude silver by the U. S. Mint.

Production of Primary Aluminum in the U. S.*

(U. S. Bureau of Mines)

(In short tons)

	1949	1950	1951	1952	1953	1954	1955	1956
Jan.	54,536	50,023	67,954	76,934	89,895	116,247	128,203	140,394
Feb.	49,749	54,493	62,740	72,374	92,649	110,483	116,236	132,762
Mar.	54,852	58,747	70,022	77,069	104,460	122,339	130,272	145,895
Apr.	54,076	58,024	67,701	76,880	102,071	120,434	126,394	144,726
May	56,909	51,929	67,720	80,803	105,464	125,138	131,128	150,800
June	54,184	60,400	67,454	77,476	104,152	120,758	127,634	145,726
July	55,777	63,518	72,698	78,368	109,285	126,161	132,669	.....
Aug.	52,001	63,006	73,816	85,175	110,545	125,296	133,551	.....
Sept.	49,742	54,449	69,429	76,882	109,333	120,332	130,606	.....
Oct.	45,790	62,915	72,647	77,312	108,219	125,089	134,655	.....
Nov.	35,865	62,276	72,246	74,639	105,636	121,252	133,689	.....
Dec.	34,161	65,897	72,454	83,419	110,291	127,056	140,748	.....
Total	603,462	718,622	836,881	937,330	1,252,013	1,460,565	1,565,721	.....

*Based on producers' reports to War Production Board to July, 1946. Thereafter to Bureau of Mines. The monthly figures are preliminary in nature and will not add to the totals derived from the Bureau's annual industry canvass.

Average Silver Prices

(Cents per fine ounce)

	1953	1954	1955	1956
Jan.	84.44	85.25	85.25	90.357
Feb.	85.25	85.25	85.25	90.90
Mar.	85.25	85.25	85.25	91.138
Apr.	85.25	85.25	87.08	90.875
May	85.25	85.25	88.928	90.75
June	85.25	85.25	89.71	90.46
July	82.25	82.25	90.49	90.14
Aug.	85.25	85.25	90.75	....
Sept.	85.25	85.25	90.795	....
Oct.	85.25	85.25	91.794	....
Nov.	85.25	85.25	91.46	....
Dec.	85.25	85.25	90.45	....
Ave.	85.183	85.25	89.116	....

Note — The averages are based on the price of refined bullion imported on or after August 31, 1942.

World Production of Copper

(American Bureau of Metal Statistics)

U. S. Copper Imports

(A.B.M.S.) (Bureau of the Census)
(In tons of 2,000 lbs.)

	1956		
	Jan.-June	May	June
Ore, matte & reg. (cont.)	57,507	12,011	8,515
Canada	10,144	252	2,893
Mexico	6,726	1,299	506
Cuba	8,263	1,513	1,478
Bolivia	1,448	249	...
Chile	9,347	1,226	1,728
Peru	6,247	1,320	1,302
Cyprus	2,173	2,173	...
Philippines	5,317	2,034	...
U. of S. Africa	7,287	1,806	550
Australia	478	121	36
Other countries	77	18	22
Blister copper (content)	116,022	23,191	29,106
Canada	1,038	50	988
Mexico	19,301	4,026	1,988
Chile	68,337	14,458	13,928
Peru	4,151	...	...
Belg. Congo	3,803	543	1,086
N. Rhodesia	9,176	1,111	4,454
U. of S. Africa	833	833	...
Turkey	3,271	1,088	1,632
Australia	6,112	1,082	5,030
Refined cathodes and shapes	98,448	15,994	14,683
Canada	40,737	7,289	4,893
Mexico	1,842	354	110
Chile	25,160	4,520	4,446
Peru	10,827	1,963	2,629
Belgium	551	...	...
Germany (W.)	2,738	110	276
Norway	3,600	550	950
Sweden	224	...	...
U. Kingdom	3,237	308	280
Yugoslavia	138	...	...
Belg. Congo	2,997	600	599
N. Rhodesia	5,597	...	...
Japan	800	300	500
Total Imports:			
Crude and ref.	271,977	51,196	52,304
In rolls, sheets or rods	5,241	859	898
Old and scrap (content)	3,385	923	504
Composition metal (cont.)	35	...	...
Brass scrap & old (cu. cont.)	2,880	327	184

U. S. Zinc Exports

(A. B. M. S.)
(Bureau of the Census; in tons of 2,000 lbs.)

	1956		
	Jan.-June	May	June
Ore, conc. (cont.)	‡	‡	‡
Slabs, blocks, etc.	4,471	413	647
Mexico	290	...	...
Cuba	54	...	9
Brazil	32	...	...
Chile	38	21	...
Belgium	560	...	224
Germany (W.)	112	56	56
Netherlands	14	...	...
U. Kingdom	3,024	336	336
Korea	317	...	...
Other countries	30	...	22
Scrap: Ashes, dross & skim.	9,735	1,687	2,159
Semi-fabricated forms, not elsewhere specified	2,750	437	473

‡ Not available.

Comparative Metal Prices

	Av. 1939	OPA 1946	1956 Aug. 17
Copper, Domestic (Electro, Del. Valley)	11.20	14.375	39.50-40.00
Lead (N. Y.)	5.05	8.25	16.00
P. W. Zinc (E. St. Louis, f. o. b.	5.05	5.05	13.50
New York, del.	....	....	14.00
Tin, Spot Straits, N. Y.	....	....	98.75
Aluminum Ingot 99%+	20.00	15.00	27.10
Antimony (R.M.M. brand, f. o. b. Laredo)	12.36	14.50	33.00

U. S. Copper Exports

(A. B. M. S.)
(Bureau of the Census; in tons of 2,000 lbs.)

	1956		
	Jan.-June	May	June
Ore, conc., matte and other unref. (cont.)	1,733	196	627
Refined ingots, bars, etc.†	93,880	23,922	15,147
Canada	1,804	131	156
Brazil	3,197	701	1,082
Austria	168	...	112
Belgium	34	...	10
France	36,307	9,547	5,951
Germany (W.)	15,905	4,703	2,464
Italy	7,826	2,512	256
Netherlands	3,359	503	...
Norway	1,400	280	...
Sweden	420	101	84
Switzerland	7,681	2,295	1,035
U. Kingdom	2,648	63	378
Formosa	195	...	195
India	5,760	867	1,258
Japan	6,607	2,046	1,973
Other countries	569	173	193
Total Exports:			
Crude & refined	95,613	24,118	15,774
Pipes and tubes*	1,378	212	152
Wire, bare	6,361	963	1,026
Building wire and cable‡	2,049	354	303
Weatherproof wire‡	435	95	121
Insulated copper wire n.e.s.‡	7,800	1,511	1,218

†Includes exports of refined copper resulting from scrap that was reprocessed on toll for account of the shipper.

‡ Gross weight; n.e.s. — not elsewhere specified.

* Includes plates, sheets, rods, brush copper, castings, rolls, segments (finished forms) n.e.s.

U. S. Copper Scrap Exports

(A. B. M. S.)
(Bureau of the Census; in tons of 2,000 lbs.)

	1956		
	Jan.-June	May	June
Copper scrap, unalloyed† (new and old)	11,226	1,979	420
Canada	3,265	281	63
Belgium	149	...	...
W. Germany	3,777	588	206
Netherlands	95	11	5
Switzerland	177	...	...
India	16	...	16
Japan	3,678	1,099	130
Other countries	69	...	...
Copper-base scrap, alloyed‡ (new and old)	22,715	4,402	2,135
Canada	343	24	2
Austria	291	93	...
W. Germany	9,627	1,381	882
Italy	1,483	248	88
Netherlands	373	28	73
Switzerland	85	...	16
U. Kingdom	356	20	...
India	607	99	121
Japan	9,411	2,468	953
Other countries	139	41	...

† Ash, brass mill, clippings, dross, flue dust, residues, scale, skimmings, wire scrap.

‡ Copper-base alloys, including brass and bronze — Ashes, clippings for remanufacture, cupro-nickel scrap, cupro-nickel trimmings, nickel silver scrap, phosphor bronze, phosphor copper ,skimmings, turnings, round.

U. S. Lead Imports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1956		
	Jan.-June	May	June
Ore, matte, etc. (cont.)	100,474	21,970	15,217
Canada	17,826	3,022	2,274
Mexico	1,673	340	188
Guatemala	3,767	654	629
Honduras	1,331	150	85
Bolivia	8,517	854	2,966
Chile	21	...	...
Colombia	370	191	...
Peru	32,007	6,875	3,000
U. of S. Africa	20,222	5,310	2,550
Australia	13,214	4,390	3,260
Philippines	1,128	159	144
Korea	252	25	51
Other countries	146	...	70
Pigs and bars	120,452	21,045	14,765
Canada	8,029	1,039	674
Mexico	34,081	6,056	4,114
Peru	15,930	1,356	2,660
Belgium	970	...	...
Denmark	769	...	1
Germany	168	...	...
Spain	2,837	551	...
U. Kingdom	115	...	...
Yugoslavia	22,762	3,803	4,756
Fr. Morocco	5,626	2,427	...
Australia	29,054	5,813	2,560
Other countries	111	...	...
Total Imports:			
Ore, base bullion, ref.	220,926	43,015	29,982
Lead scrap, dross, etc. (cont.)	16,955	2,321	5,862
Antimonial lead & typemetal	5,721	868	1,310
Lead content thereof	5,181	753	1,187

U. S. Zinc Imports

(A.B.M.S.) (Bureau of the Census)
(In tons of 2,000 lbs.)

	1956		
	Jan.-June	May	June
Zinc ore (content)	263,008	39,687	38,093
Canada	87,181	15,545	13,878
Mexico	92,901	14,300	15,240
Cuba	588	58	...
Guatemala	5,940	905	802
Honduras	1,284	143	216
Bolivia	4,105	250	184
Colombia	39	20	...
Chile	69	...	...
Peru	54,226	4,976	7,001
U. of S. Africa	2,456	844	...
Australia	12,645	2,319	552
Philippines	359	17	212
Other countries	1,215	310	8
Zinc blocks, pigs, etc.	86,960	14,123	10,691
Canada	46,424	7,319	5,165
Mexico	6,888	1,258	1,004
Peru	3,283	836	642
Austria	1,849	340	165
Belgium	11,208	1,763	1,197
Germany (W.)	1,489†	...	258
Italy	2,841	552	496
Netherlands	548	...	210
U. Kingdom	500	...	...
Belg. Congo	8,417	783	1,554
Australia	2,240	1,120	...
Japan	1,273	152	...
Total Imports:			
Zinc ore, blocks, pigs	349,968	53,810	48,784
Dross and skimmings	241	...	38
Old & worn out	60	...	...

† Revised.

U. K. Virgin Copper Stocks

(In long tons)
British Bureau of Non-Ferrous Metal Statistics

Copper Consumption in United Kingdom

British Bureau of Non-Ferrous Metal Statistics
(In tons of 2,240 pounds)

World Production of Copper

(American Bureau of Metal Statistics)

(In Tons of 2,000 Pounds)

	United States (a)	Canada (b)	Mexico (crude) (c)	Chile (d)	Peru (d)	Fed. Rep. of Germany (e)	Norway (f)	United Kingdom (g-h)	Yugo-slavia (c)	India (f-h)	Japan (e)	Turkey (f)	Aus-tralia (c)	Northern Rho-desia (c)	Union of South Africa (d)
1951															
Total	964,589	269,971	60,511	396,937	25,495	234,647	.....	.....	.....	....	100,254	....	16,984	349,667	36,104
1952															
Total	961,886	258,868	60,874	422,493	22,640	206,747	11,206	163,968	36,176	7,009	104,060	2,546	21,119	336,883	37,459
1953															
Total	957,318	253,652	63,380	371,742	25,803	233,330	13,306	108,604	34,381	5,709	100,381	25,641	37,080	382,884	38,341
1954															
Total	863,721	302,984	59,030	372,814	29,233	258,259	14,205	152,858	33,394	8,274	117,371	27,727	42,241	386,577	43,153
1955															
Feb.	89,078	25,088	4,495	38,630	2,400	22,171	1,031	10,712	2,175	700	10,099	2,189	4,744	16,597	3,341
Mar.	98,171	26,701	4,362	38,341	1,950	25,449	1,216	14,274	2,383	780	11,392	2,265	5,935	28,936	4,063
Apr.	93,669	25,202	4,946	38,510	2,434	24,951	1,297	8,355	2,252	740	10,906	1,335	4,114	33,467	4,468
May	95,042	25,718	4,677	38,735	2,616	24,642	1,236	11,772	2,487	743	8,096	1,953	4,501	35,301	4,639
June	90,645	27,465	5,402	38,164	2,635	23,639	1,433	14,837	3,045	718	5,655	2,252	4,308	35,166	2,700
July	31,846	26,481	5,425	35,081	2,738	23,841	1,228	9,418	3,200	717	10,810	2,305	4,300	34,306	4,548
Aug.	67,990	27,844	4,829	36,949	2,613	24,944	1,231	10,946	2,976	763	11,623	1,623	4,760	28,942	4,737
Sept.	96,343	27,502	4,745	30,914	2,544	24,096	1,479	11,396	2,793	682	11,657	....	....	33,087	4,411
Oct.	99,514	27,783	5,816	37,427	2,055	23,317	1,439	10,806	2,151	694	11,543	2,552	3,770	36,149	4,368
Nov.	94,287	27,392	5,999	40,699	2,554	24,143	1,308	12,728	2,544	782	11,868	3,010	4,826	28,749	3,844
Dec.	93,186	32,850	5,501	19,232	2,610	22,973	1,010	13,871	2,794	814	11,872	2,301	1,804	31,676	4,068
1956															
Jan.	96,732	30,063	6,040	30,475	593	23,826	1,329	14,597	2,436	456	11,133	1,893	3,985	32,887	3,808
Feb.	89,326	26,867	4,965	37,420	2,492	21,106	1,259	11,437	1,872	792	11,029	2,477	4,331	33,545	2,924
Mar.	99,681	31,659	7,107	38,356	2,500	23,838	1,322	12,281	2,313	821	10,390	3,074	....	32,049	3,773
Apr.	95,499	27,804	6,436	39,731	2,474	22,593	1,402	8,154	1,660	761	9,927	2,355	....	29,988	....
May	98,208	.....	5,801	35,246	2,612	23,084	....	10,217	....	755	4,932	....	....	32,235	....
June	95,105	.....	5,614	.....	2,412	.....	.....	.....	.....	...	....	.....	....	31,637	.....

(a) Reported by Copper Institute. Crude, "recoverable contents of mine production or smelter production or shipments, and custom intake". Does not include intake of scrap nor of imported ore except chat received from Cuba and Philippines. (b) Blister copper plus recoverable copper in concentrates, matte, ect., exported. (c) Crude copper, i. e., copper content of blister or converter copper as originally produced in the several countries, although some of it may be refined at home; e. g., in Rhodesia. (d) Blister and/or refined. (e) Refined. There are quantities of scrap included in the electrolytic production in addition to that reported, tonnage of which is not obtainable. (f) Smelter production. (g) Refinery production from imported blister only. (h) British Bureau of Non-Ferrous Metal Statistics. *Refined.

World Production of Refined Lead

(American Bureau of Metal Statistics)

(In Tons of 2,000 Pounds)

	United States	Canada	Mexico	Peru	Belgium	France	Fed. Rep. of Germany	Italy	Spain	Yugo-slavia	Japan	Aus-tralia (a)	French Moroco	Tunisia	Rho-desia	Total
1951																
Total	486,874	162,712	219,352	48,824	77,873	53,831	170,766	39,683	45,460	.....	18,516	217,301	20,287	25,476	15,646	1,602,601
1952																
Total	532,778	183,389	248,551	53,536	83,139	59,607	152,751	38,504	46,060	74,053	20,382	217,293	31,224	28,264	14,112	1,783,643
1953																
Total	533,883	166,356	225,075	66,520	84,162	60,887	164,077	40,786	53,799	78,038	25,513	241,419	29,970	30,397	12,891	1,813,773
1954																
Total	551,618	166,379	231,595	63,735	79,260	71,083	162,773	41,150	62,475	73,555	37,612	260,424	29,417	30,015	16,800	1,877,841
1956																
Feb.	40,173	12,899	17,442	5,325	6,999	6,023	12,606	4,473	6,453	7,142	3,644	16,156	4,566	2,261	980	147,142
Mar.	50,308	14,332	19,996	6,978	7,102	6,850	14,512	4,304	5,771	6,994	3,395	17,182	1,004	2,355	672	160,754
Apr.	50,274	13,615	16,730	5,294	6,737	5,855	13,713	2,583	5,078	6,787	3,411	22,368	....	2,134	1,792	156,371
May	45,435	13,886	21,340	5,364	6,642	7,601	13,676	3,200	6,254	6,334	2,314	26,531	2,025	1,192	1,792	163,586
June	48,133	14,061	18,189	5,442	6,249	7,068	11,363	3,169	5,929	7,288	2,087	21,427	4,957	1,903	1,680	158,678
July	23,850	7,237	17,255	5,598	7,120	3,108	10,077	4,117	4,844	7,758	3,724	15,930	3,746	2,231	1,680	118,347
Aug.	36,912	11,492	19,301	5,529	7,638	4,826	10,345	2,579	4,357	7,047	3,860	23,682	2,976	2,541	1,680	144,655
Sept.	50,453	14,323	18,382	5,323	9,032	6,558	13,910	3,805	6,421	5,687	3,851	25,833	3,236	2,706	1,680	171,200
Oct.	53,747	15,326	17,225	5,760	8,777	7,044	15,387	4,828	5,709	6,260	3,579	21,946	....	1,944	1,568	169,100
Nov.	52,623	12,587	17,576	5,473	8,468	5,891	17,503	3,741	6,133	7,799	3,785	18,820	....	2,535	1,456	164,390
Dec.	50,448	12,553	18,637	7,038	8,030	6,730	16,806	4,031	5,267	7,208	3,946	21,113	1,414	3,790	1,456	168,467
1956																
Jan.	51,306	12 179	17,587	1,730	8,731	7,014	16,218	3,722	5,399	6,210	3,929	24,196	4,967	2,070	1,456	167,374
Feb.	49,475	11,469	16,510	5,197	9,446	6,241	15,743	3,688	5,202	4,708	4,239	16,392	4,572	1,307	1,232	157,173
Mar.	54,174	12,438	17,376	6,142	9,338	6,383	14,562	3,164	5,319	7,187	4,009	19,535	2,056	2,273	1,680	167,740
Apr.	52,976	.....	15,186	6,790	8,650	6,276	14,398	3,799	6,118	7,159	4,136	17,407	798	2,372	1,456	167,740
May	47,961	.....	17,611	6,970	....	6,814	14,022	4,511	5,660	....	4,210	.....	....	....	1,456	.....
June	47,367	.....	.....	6,779	.....	.....	.....	.....	.....	.....	....	.....	....	....	1,456	.....

(a) Production credited to Australia includes lead refined in England from Australian base bullion.

World Production of Slab Zinc

(American Bureau of Metal Statistics)

(In Tons of 2,000 Pounds)

	United States (a)	Can. (b)	Mexico	Peru (b-c)	Belgium	France (a)	Fed. Rep. of Germany	Great Britain	Italy	Nether-lands	Norway (b)	Spain	Yugo-slovia	Japan (a)	Aus-tralia (b)	Rho-desia (b)	Total (d)
1951																	
Total	931,833	218,548	57,990	1,003	220,479	82,184	155,024	78,101	52,058	24,924	44,971	23,444	....	62,109	88,103	25,301	2,065,216
1952																	
Total	961,430	223,140	61,456	5,491	205,909	88,255	162,272	76,981	60,438	28,555	43,061	23,329	15,943	77,203	97,931	25,637	2,141,088
1953																	
Total	971,191	247,707	59,589	9,819	213,215	89,218	163,430	81,436	65,730	27,721	42,566	24,152	16,037	86,833	101,003	28,370	2,228,017
1954																	
Total	868,242	213,810	60,477	16,982	234,896	122,248	184,806	90,987	74,356	28,686	48,768	25,109	15,040	112,292	117,066	29,736	2,243,501
1955																	
Feb	78,977	19,865	4,737	1,612	18,739	10,244	14,723	7,372	5,663	2,216	3,988	1,930	1,221	8,792	8,745	2,660	190,540
Mar.	89,179	22,216	5,291	2,057	19,096	11,275	16,867	9,031	6,879	2,422	3,165	2,003	1,457	10,863	9,378	2,744	218,928
Apr.	83,786	21,301	5,136	1,770	19,279	10,582	16,409	7,392	6,393	2,519	4,168	2,198	1,421	10,750	7,737	2,632	203,478
May	86,177	21,600	5,271	1,870	20,280	11,219	16,985	6,870	6,639	2,609	4,460	2,337	1,369	7,639	8,508	2,688	206,521
June	84,458	20,565	5,173	2,124	19,337	10,715	16,476	6,480	6,480	2,628	3,854	2,227	1,285	7,141	8,337	2,604	202,444
July	84,400	21,769	5,297	1,725	19,561	10,463	16,918	5,902	6,802	2,737	4,238	2,251	1,338	11,223	10,413	2,660	207,697
Aug.	84,877	22,029	5,168	1,880	19,190	10,185	16,566	6,751	7,088	2,529	4,422	2,197	1,175	11,012	10,089	2,576	207,731
Sept.	83,448	20,898	4,967	1,754	18,863	7,603	16,496	8,609	6,323	2,621	4,451	2,121	1,198	11,227	9,817	2,464	202,860
Oct.	89,449	22,206	5,212	1,545	19,345	10,262	16,735	6,940	6,906	2,735	4,704	2,243	1,176	11,644	9,972	2,604	213,678
Nov.	87,616	21,398	5,066	818	19,244	9,848	15,708	7,442	6,183	2,846	4,501	2,185	1,142	11,600	9,860	2,576	210,265
Dec.	92,578	21,135	5,252	....	20,079	10,332	17,061	9,316	6,420	2,886	4,492	2,258	1,147	11,654	9,972	2,632	220,043
1956																	
Jan.	90,313	21,696	5,279	....	20,359	11,756	16,827	6,768	6,315	2,786	4,345	2,219	1,146	15,928	9,753	2,632	222,280
Feb.	86,329	20,356	4,949	963	20,589	9,911	15,598	7,684	5,799	2,777	3,961	2,038	1,144	10,337	8,982	2,688	208,693
Mar.	91,690	22,010	5,333	1,980	20,710	9,491	16,839	9,351	6,355	2,853	4,331	2,166	1,236	11,702	9,572	2,688	224,327
Apr.	88,664	21,339	5,207	1,220	20,687	10,819	16,689	7,382	6,613	2,693	4,002	2,172	1,222	13,805	9,243	2,688	.....
May	81,238	21,790	5,248	1,225	.....	11,174	17,212	6,719	7,190	2,662	4,168	2,226	....	13,365	....	2,688	.....
June	78,370	20,780	5,142	1,439	.....	.....	.....	8,857	....	2,530	4,427	....	....	.....	....	2,632	.....

(a) Partially electrolytic. (b) Entirely electrolytic. (c) Beginning 1954 both electrolytic and electrothemic. (d) The above totals omits production in Russia, Czechoslovakia, Poland and in Argentina.

Canada's Copper Output

Canada's Lead Exports

Canada's Silver Exports

U. K. Virgin Copper Stocks

(In long tons)

British Bureau of Non-Ferrous Metal Statistics

At start of:	1954	1955	1956
Jan.	55,344	61,480	76,197
Feb.	60,402	62,771	79,377
Mar.	60,084	70,185	71,634
Apr.	47,258	67,566	73,776
May	60,118	60,767	76,481
June	65,314	58,546	71,713
July	68,037	64,256	76,188
Aug.	67,307	99,628	.....
Sept.	77,323	107,261	.....
Oct.	72,266	93,681	.....
Nov.	61,484	75,533	.....
Dec.	61,673	77,749	.....

U. K. Refined Lead Stocks

British Bureau of Non-Ferrous Metal Statistics

(In long tons)

At start of:	1954	1955	1956
Jan.	26,887	31,173	40,987
Feb.	32,653	32,274	34,326
Mar.	30,697	39,461	29,693
Apr.	28,312	37,587	33,974
May	30,005	45,226	29,479
June	29,793	38,760	30,537
July	30,437	30,816	37,088
Aug.	29,492	32,270	.....
Sept.	26,298	48,036	.....
Oct.	28,958	42,912	.....
Nov.	22,269	42,061	.....
Dec.	26,937	38,410	.....

U. K. Stocks of Zinc

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

At start of:	Virgin Zinc		Zinc. Conc.	
	1955	1956	1955	1956
Jan.	49,962	49,962	47,200	54,447
Feb.	48,027	45,239	43,779	49,537
Mar.	45,679	44,288	44,176	48,667
Apr.	49,301	49,194	51,603	40,502
May	53,573	49,129	47,741	36,524
June	50,447	47,226	47,791	40,136
July	48,227	47,664	47,399	40,763
Aug.	54,562	.....	50,649	.....
Sept.	60,935	.....	55,350	.....
Oct.	60,800	.....	55,234	.....
Nov.	54,679	.....	60,065	.....
Dec.	50,678	.....	58,414	.....

U. K. Copper Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

(Gross Weight)	1956		
	Jan.-May	Apr.	May
Copper and copper alloys	158,425	31,821	30,518
U. of S. Africa	396	...	90
N. Rhodesia	95,014	18,328	16,154
Canada	24,181	4,687	4,385
Belgium	2,345	344	517
Germany (W.)	386	55	91
Norway	340	199	75
United States	2,348	442	183
Chile	25,030	4,825	7,965
Peru	1,407	...	480
Belg. Congo	4,200	1,650	550
Other countries	2,778	1,291	28
Of which:			
Electrolytic	99,599	17,018	19,518
Other refined	12,629	3,478	3,090
Blister or rough	44,550	11,131	7,743
Wrought and alloys	1,647	194	167
Total	158,425	31,821	30,518

U. K. Copper Consumption

British Bureau of Non-Ferrous Metal Statistics

(In tons of 2,240 pounds)

	Unalloyed	Alloyed*	Total	Virgin	Scrap
1953 Total	243,717	192,337	447,260	322,311	124,949
1954 Total	328,149	251,989	580,138	448,413	131,725
1955					
January	28,636	22,582	51,218	39,705	11,513
February	27,607	23,098	50,705	36,906	13,799
March	31,901	25,894	57,795	41,083	16,712
April	26,101	22,045	48,146	36,008	12,138
May	31,107	23,297	54,404	39,485	14,919
June	36,163	23,904	60,067	45,367	14,700
July	26,601	19,698	46,299	31,749	14,550
August	24,731	18,390	43,121	33,255	9,866
September	36,286	24,007	60,293	47,180	13,113
October	36,309	25,276	61,585	47,519	14,066
November	35,791	25,854	61,645	48,690	12,955
December	32,953	23,108	56,061	41,130	14,931
Total	377,576	281,953	659,529	496,467	163,062
1956					
January	34,567	24,461	59,028	45,676	13,352
February	33,213	24,163	57,376	40,934	16,442
March	32,903	24,366	57,269	43,913	13,356
April	27,489	21,029	48,518	36,418	12,100
May	29,845	22,295	52,140	41,747	10,393
June	33,774	21,810	55,584	43,622	11,962

*Includes copper sulphate effective October, 1954.

U. K. Zinc Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

(Gross Weight)	1956		
	Jan.-May	Apr.	May
Zinc ore and concentrates	57,245	8,705	24,883
Zinc conc.	†	3,613	†
Italy	...	2,846	...
Other countries	...	767	...
Zinc and zinc alloys	54,248	11,234	11,960
N. Rhodesia	2,291	413	351
Australia	3,825	1,775	1,250
Canada	20,380	2,026	4,891
Belgium	6,929	1,110	1,324
Germany (W.)	2,130	186	677
Netherlands	837	50	7
Norway	450	...	...
United States	5,120	2,274	1,110
Other countries	12,286	3,400	2,350
Of which:			
Zinc or spelter, unwrought in ingots, blocks, bars, slabs & cakes	53,918	11,162	11,922
Other	330	72	38
Total	54,248	11,234	11,960

† Not yet available.

Zinc Imports and Exports by Principal Countries

(A.B.M.S.)

Reported in pigs, bars, etc.; metric tons except where otherwise noted.

	1956		
	Mar.	Apr.	May
IMPORTS			
U. S. (s.t.)	12,177	14,081	14,123
Canada (s.t.)	14	...	...
Denmark	282	294	424
France	1,224	1,318	1,099
Italy	373	...	...
Netherlands	784	574	...
Sweden	601	3,105	...
Switzerland†	1,125	1,901	1,007
U. K. (l.t.)	10,706	11,234	11,960
India‡ (l.t.)	1,671	2,392	2,929
EXPORTS			
U. S. (s.t.)	554	1,083	413
Canada (s.t.)	8,822	14,317	11,357
Belgium	10,894	...	...
Denmark	...	20	20
France	...	10	1
Italy	1,502	...	...
Netherlands	2,455	1,738	...
Norway	4,279	2,422	...
Switzerland†	734	363	202
U. K.* (l.t.)	288	417	337
Northern Rhodesia‡ (l.t.)	2,482	2,137	1,910
Australia‡ (l.t.)	2,219	...	...
Belg. Congo	4,382	...	...

† Includes scrap.
* Includes manufactures.
‡ British Bureau of Non-Ferrous Metal Statistics.

United Kingdom Tin Statistics

(British Bureau of Non-Ferrous Metal Statistics)

	Tin Content of Tin in Ore			Tin Metal				
	Imports	Production*	Stock at end of period*	Imports	Production*	Consumption	Exports & Re-exports	Stock at end of period
1954 Total	27,494	940	2,473	2,404	27,475	21,389	8,585	4,347
1955								
April	2,133	87	3,550	56	966	1,794	532	4,026
May	2,100	81	2,962	...	2,493	1,840	811	3,742
June	898	96	1,119	21	2,595	1,997	363	3,280
July	4,006	95	2,700	3	2,201	1,615	1,581	3,232
August	2,163	78	2,300	10	2,545	1,576	733	3,512
September	1,738	97	1,800	15	2,283	1,920	981	3,053
October	2,245	90	2,349	35	2,197	1,866	1,097	2,363
November	3,034	86	2,878	436	2,421	2,081	577	2,935
December	1,679	71	2,181	155	2,233	1,689	528	2,999
1955 Total	27,084	1,034	2,181	1,227	27,241	22,390	8,924	2,999
1956								
January	1,548	110	1,194	14	2,493	1,881	704	3,236
February	2,695	88	2,384	129	1,769	2,082	793	2,671
March	2,526	94	2,705	730	2,452	1,825	237	3,804
April	2,045	...	....	155	....	1,692	475	3,636

*As reported by International Tin Study Group. Production of Tin Metal includes production from imported scrap and residues refined on toll. Stocks exclude strategic stock but include official warehouse stocks.

Canadian Copper Exports

Copper Imports and Exports

French Copper Imports

Canada's Copper Output

(Dominion Bureau of Statistics)

(Refined Copper)
(In Tons)

	1953	1954	1955	1956
Jan.	21,830	15,001	22,678	26,739
Feb.	21,075	13,954	21,533	26,321
Mar.	22,432	21,075	25,181	26,830
Apr.	21,747	20,412	24,221	26,732
May	20,179	23,012	23,921	27,626
June	18,384	23,344	21,981	.....
July	19,996	21,582	21,286	.....
Aug.	19,886	22,000	26,424	.....
Sept.	16,777	22,684	24,943	.....
Oct.	17,675	21,661	25,658	.....
Nov.	17,101	22,981	25,340	.....
Dec.	18,703	24,935	27,312	.....
Year	235,787	252,643	290,478.	.....

Canada's Lead Exports

(Dominion Bureau of Statistics)

(In Pigs)
(In Tons)

	1953	1954	1955	1956
Jan.	11,212	6,170	5,500	4,888
Feb.	8,710	7,560	11,882	3,856
Mar.	14,943	11,092	10,318	4,007
Apr.	14,765	9,606	11,967	7,636
May	7,039	11,483	6,416	7,214
June	13,434	12,018	9,897	....
July	1,357	13,152	8,341	....
Aug.	8,869	8,646	4,884	....
Sept.	3,903	10,045	5,538	....
Oct.	7,532	8,005	8,053	....
Nov.	6,581	10,817	4,622	....
Dec.	4,354	7,815	5,286	....
Year	102,879	116,409	92,704	.....

Canada's Silver Exports

(Dominion Bureau of Statistics)

(In ores and concentrates)
(Fine Ounces)

	1954	1955	1956
Jan.	547,951	429,704	435,047
Feb.	567,225	457,261	196,803
Mar.	849,502	411,597	328,857
Apr.	572,059	493,578	348,838
May	660,724	445,054	447,710
June	682,906	592,238	.....
July	1,210,045	285,350	.....
Aug.	953,379	644,932	.....
Sept.	605,188	636,992	.....
Oct.	612,874	684,301	.....
Nov.	606,274	387,147	.....
Dec.	804,213	405,719	.....
Year	8,672,340	5,873,873	.....

Canada's Copper Exports

(Dominion Bureau of Statistics)

(Ingots, bars, slabs and billets)
(In Tons)

	1953	1954	1955	1956
Jan.	7,668	9,081	11,078	15,981
Feb.	16,411	8,385	12,897	11,041
Mar.	10,578	11,671	12,423	12,276
Apr.	11,153	11,218	10,321	14,476
May	14,726	18,407	10,911	12,581
June	15,053	14,877	13,387	.....
July	13,939	15,467	12,674	.....
Aug.	7,272	14,158	13,219	.....
Sept.	8,139	14,069	13,479	.....
Oct.	8,957	11,528	14,208	.....
Nov.	9,062	13,372	14,545	.....
Dec.	9,036	13,897	14,057	.....
Year	131,994	156,130	153,199	.....

Canada's Zinc Output

(Dominion Bureau of Statistics)

(Refined Zinc)
(In Tons)

	1953	1954	1955	1956
Jan.	18,370	17,155	22,028	21,696
Feb.	18,677	15,199	19,865	20,356
Mar.	20,693	16,550	22,215	22,010
Apr.	20,003	16,249	21,301	21,339
May	20,090	16,530	21,599	21,790
June	20,589	17,017	20,565	.....
July	21,595	17,917	21,769	.....
Aug.	21,703	18,755	22,029	.....
Sept.	21,157	18,023	20,898	.....
Oct.	21,888	18,871	22,206	.....
Nov.	21,051	19,662	21,398	.....
Dec.	21,899	21,922	21,135	.....
Year	247,707	213,810	257,008	.....

Canada's Silver Output

(Dominion Bureau of Statistics)

(In Ounces)

	1954	1955	1956
Jan.	2,603,593	2,182,386	2,280,575
Feb.	2,068,740	1,960,506	2,094,467
Mar.	2,352,392	2,413,591	2,296,504
Apr.	2,745,615	2,304,287	1,823,211
May	2,564,919	2,235,620	2,492,339
June	2,769,694	2,461,675	.....
July	2,717,859	2,385,654	.....
Aug.	2,840,385	2,480,607	.....
Sept.	2,804,384	2,386,385	.....
Oct.	2,461,823	2,371,890	.....
Nov.	2,823,719	2,088,991	.....
Dec.	2,364,826	2,388,627	.....
Year	31,117,949	27,696,319	.....

Canada's Lead Output

(Dominion Bureau of Statistics)

(Recoverable Lead)*
(In Tons)

	1953	1954	1955	1956
Jan.	19,502	17,716	18,959	16,002
Feb.	16,888	16,863	15,018	14,344
Mar.	14,183	17,104	19,113	16,857
Apr.	18,640	19,452	17,889	11,573
May	16,120	19,953	16,808	15,446
June	15,302	18,988	17,800	.....
July	11,969	19,164	16,650	.....
Aug.	13,864	18,237	16,676	.....
Sept.	14,335	17,066	15,972	.....
Oct.	16,327	16,569	13,658	.....
Nov.	19,433	18,365	15,182	.....
Dec.	19,273	19,093	17,857	.....
Year	195,836	219,280	201,583	.....

*New base bullion from Canadian ores plus recoverable lead in ores or concentrates shipped for export.

Canada's Zinc Exports

(Dominion Bureau of Statistics)

(Slabs in Tons)

	1953	1954	1955	1956
Jan.	17,478	16,625	22,181	15,550
Feb.	13,580	11,328	25,556	11,757
Mar.	18,307	18,199	20,178	8,822
Apr.	17,068	17,926	21,018	14,317
May	15,595	13,926	14,820	11,357
June	14,919	15,654	19,581	.....
July	10,068	27,582	13,522	.....
Aug.	8,594	14,934	16,581	.....
Sept.	9,423	17,298	11,793	.....
Oct.	11,862	13,064	19,836	.....
Nov.	10,685	16,224	14,164	.....
Dec.	10,809	23,277	14,607	.....
Year	158,388	206,037	213,837	.....

Canada's Nickel Output

(Dominion Bureau of Statistics)

(In Tons)

	1953	1954	1955	1956
Jan.	12,517	12,765	14,387	14,985
Feb.	10,662	11,874	13,375	14,997
Mar.	12,268	13,619	15,544	15,504
Apr.	11,841	13,015	15,011	14,431
May	11,610	13,458	15,352	15,203
June	11,687	13,269	14,835	.....
July	11,801	12,901	14,530	.....
Aug.	11,911	13,428	14,825	.....
Sept.	12,031	13,521	13,734	.....
Oct.	12,469	14,323	14,411	.....
Nov.	12,764	14,159	14,290	.....
Dec.	12,122	14,947	14,881	.....
Year	143,693	161,79	175,173	.....

Canadian Copper Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)

	1956		
	Jan.-May	Apr.	May
Ore, matte, regulus, etc. (content)	14,023	2,576	2,897
United States	8,317	1,802	1,990
Norway	5,248	638	860
U. Kingdom	458	136	47
Ingots, bars, billets, anodes	66,624	14,475	12,851
United States	36,435	8,145	7,465
Brazil	1	...	...
France	4,348	784	939
U. Kingdom	25,163	5,320	4,220
India	672	224	224
Other countries	5	2	3
Total Exports:			
Crude and Refined	80,647	17,051	15,748
Old and scrap	6,718	1,416	2,077
Roads, strips, sheet and tubing	6,220	1,252	659

Canadian Zinc Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)

	1956		
	Jan.-May	Apr.	May
Ore (zinc cont.)	72,202	15,272	13,566
United States	72,202	15,272	13,566
Slab zinc	61,803	14,317	11,357
United States	41,589	7,848	7,385
U. Kingdom	19,480	6,469	3,277
Korea	63	...	63
Hong Kong	56	...	56
Taiwan	53	...	16
India	560	...	560
Other countries	2	...	...
Total Exports:			
Ore and slabs	134,005	29,589	24,923
Zinc scrap, dross, ashes	1,638	73	837
United States	310	73	4
Belgium	622	...	540
Germany (W.)	97	...	...
Netherlands	545	...	293
India	64	...	...

Canada's Nickel Exports

(Dominion Bureau of Statistics)

(Refined, in oxides, matte, etc.)

(In Tons)

	1955	1956
January	14,421	15,121
February	13,915	13,940
March	13,564	16,219
April	16,083	14,448
May	14,761	14,729
June	16,296	.....
July	13,929	.....
August	14,861	.....
September	14,638	.....
October	13,589	.....
November	13,073	.....
December	14,749	.....
Year	173,879	.....

Copper Imports and Exports by Principal Countries

(A.B.M.S.)

Reported in ingots, slabs, etc.; metric tons except where otherwise noted.

	1956		
	Mar.	Apr.	May
IMPORTS			
U. S. (blist., s.t.)	18,287	17,550	23,191
(ore, etc., s.t.)	5,420	12,706	12,011
(ref., s.t.)	19,443	16,687	15,994
Belgium†	10,806	...	...
Denmark	...	332	163
France (crude)	813	...	813
(refined)	14,283	13,822	16,151
Italy	11,295	...	...
Netherlands	1,314	290	2,860
Norway	408	...	...
Sweden	4,373	5,690	...
Switzerland	2,464	4,030	4,330
U. K. (l.t.)	38,749	31,821	30,518
India‡ (ref., l.t.)	2,088	1,589	1,982
EXPORTS			
U. S. ((ore and unref., s.t.)	324	492	196
(ref., s.t.)	16,076	12,115	23,922
Canada (ref., s.t.)	12,276	14,475	12,851
Belgium†	11,545	...	...
Finland*	451	61	...
Norway	1,292	988	...
Sweden	1,101	1,920	...
U. K. (l.t.)	926	1,702	3,222
Turkey†	2,116	1,000	...
N. Rhodesia (ref. & blist., l.t.)	26,742	29,829	34,199

† Includes copper.
* Includes old.
‡ British Bureau of Non-Ferrous Metal Statistics.

U. K. Copper Exports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

	1956		
	Jan.-May	Apr.	May
(Gross Weight)			
Copper unwrought, ingots, blocks, slabs, bars, etc.	10,108	1,702	3,222
Plates, sheets, rods, etc.	7,106	1,152	1,575
Wire (including uninsulated electric wire)	19,428	2,851	1,678
Tubes	4,472	777	1,086
Other copper worked (incl. pipe fittings)	509	159	86
Total	41,623	6,641	7,647

Canadian Lead Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)

	1956		
	Jan.-May	Apr.	May
Ore (lead content)	12,123	2,817	2,603
United States	12,123	2,817	2,603
Refined lead	27,601	7,636	7,214
United States	7,377	1,943	1,140
Cuba	1	...	1
Venezuela	44	...	...
U. Kingdom	17,785	4,844	5,096
Japan	2,337	849	977
Other countries	57	...	...
Total Exports			
Ore and refined	39,724	10,453	9,817
Pipe and tubing	6	...	4
Lead scrap	46	3	...

French Copper Imports

(American Bureau of Metal Statistics)

(In Metric Tons)

	1956		
	Jan.-May	Apr.	May
Crude copper for refining (blister, black and cement)	2,540	...	813
Belgium	102	...	...
Belg. Congo	2,438	...	813
Refined	69,459	13,822	16,151
United States	26,651	6,468	5,776
Canada	3,865	712	885
Chile	410	...	410
Peru	3	3	...
Belgium	16,718	2,348	5,361
Germany (W.)	1,540	303	729
Norway	817	51	...
Sweden	152	152	...
U. Kingdom	807	152	76
Belg. Congo	12,058	2,875	2,045
U. of S. Africa	521	...	...
Rhodesia-Nyassaland	5,873	758	869
Other countries	44	...	...
Total Imports:			
Crude and refined	71,999	13,822	16,964

French Zinc Imports

(American Bureau of Metal Statistics)

(In Metric Tons)

	1956		
	Jan.-May	Apr.	May
Ore (gross weight)	124,196	16,514	24,785
Canada	5,083	...	...
Peru	7,003	1,268	1,128
Belgium	818	...	818
Germany (W.)	1,530	530	250
Greece	2,270	1,141	305
Italy	7,173	457	808
Netherlands	304	304	...
Norway	229	229	...
Spain	19,995	4,419	4,034
Yugoslavia	7,400	...	3,800
Algeria	20,110	1,850	3,108
Fr. Morocco	33,951	1,862	6,931
Tunisia	6,116	1,281	...
Belg. Congo	5,373	3,173	2,200
Australia	6,058	...	1,120
Burma	500	...	...
Other countries	283	...	283
Slabs, bars, blocks, etc.	5,393	1,318	1,099
Mexico	100	...	...
Belgium	4,874	1,075	1,034
Germany (W.)	248	199	...
Italy	130	20	50
U. Kingdom	2	...	...
Algeria	39	24	15

French Metal Exports

(American Bureau of Metal Statistics)

(In Metric Tons)

	1956		
	Jan.-May	Apr.	May
Lead			
Ore (gross weight)	95	38	20
Pig Lead: Non-argentiferous	5,882	1,045	654
Antimonial lead	274	28	1
Zinc			
Slabs, bars, blocks, etc.	22	10	1
Copper			
Crude copper for refining (blister, black and cement)	151	68	51

Nonferrous Castings

MONTHLY SHIPMENTS, BY TYPE OF METAL
(Bureau of Census — Thousands of Pounds)

	Aluminum	Copper	Magnesium	Zinc	Lead Die
1951 Total	515,131	1,197,443	30,825	487,996	25,936
1952 Total	518,979	1,009,910	34,857	408,353	20,941
1953 Total	658,022	990,496	34,517	521,253	20,444
1954					
December	62,752	72,421	2,287	50,177	1,563
Total	607,764	834,557	25,572	474,741	18,396
1955					
January	64,414	72,233	2,305	58,586	1,734
February	66,869	75,253	2,160	58,585	1,571
March	78,958	92,149	2,572	71,811	1,537
April	73,049	84,183	2,633	71,595	1,614
May	71,691	85,008	2,399	63,735	1,530
June	68,473	90,476	2,367	66,569	2,045
July	55,033	65,816	1,920	47,928	1,684
August	64,864	87,206	2,176	62,677	1,904
September	67,170	89,600	2,478	62,030	1,924
October	72,197	91,192	2,302	71,689	1,789
November	75,065	90,345	2,325	75,099	1,896
December	75,275	88,287	2,255	70,950	1,817
Total	833,058	1,011,748	27,892	781,254	21,045
1956					
January	74,152	89,767	2,959	68,050	1,598
February	73,096	91,706	2,977	66,584	1,636
March	73,785	96,085	3,046	65,760	1,644
April	67,880	90,679	3,140	58,274	1,910
May	65,786	89,188	3,021	52,205	1,919

Copper Castings Shipments

BY TYPE OF CASTING
(Bureau of Census) (Thousands of Pounds)

	Total	Sand	Permanent Mold	Die	All Other
1951 Total	1,197,443	1,075,437	69,883	12,516	39,607
1952 Total	1,009,910	910,862	63,865	8,259	26,924
1953 Total	990,496	888,369	61,316	10,077	30,734
1954					
November	70,020	63,065	4,089	507	2,359
December	72,421	65,159	4,346	482	2,434
Total	834,557	751,804	48,849	6,480	27,394
1955					
January	72,233	64,540	4,678	591	2,424
February	75,253	67,768	4,598	641	2,246
March	92,149	83,149	5,649	742	2,609
April	84,183	75,903	5,152	654	2,474
May	85,008	76,064	5,513	764	2,667
June	90,476	80,869	5,840	739	3,028
July	65,816	59,138	3,998	691	1,989
August	87,206	77,721	5,322	844	2,413
September	89,600	80,481	5,603	692	2,824
October	91,192	82,958	4,513	727	2,994
November	90,345	80,934	5,807	743	2,861
December	88,287	78,327	6,368	713	2,879
Total	1,011,748	907,852	63,041	8,541	31,408
1956					
January	89,767	80,116	6,135	799	2,717
February	91,706	82,244	5,888	727	2,847
March	96,085	85,894	6,299	782	3,110
April	90,679	81,333	5,835	722	2,789
May	89,188	80,105	5,448	751	2,884

Nickel Averages

Electro, cathode sheets, 99.00%, f.o.b. refinery, duty included
(Cents per pound)

	1953	1954	1955	1956
Jan.	58.62	60.00	64.50	64.50
Feb.	60.00	60.00	64.50	64.50
Mar.	60.00	60.00	64.50	64.50
Apr.	60.00	60.00	64.50	64.50
May	60.00	60.00	64.50	64.50
June	60.00	60.00	64.50	64.50
July	60.00	60.00	64.50	64.50
Aug.	60.00	60.00	64.50	....
Sept.	60.00	60.00	64.50	....
Oct.	60.00	60.00	64.50	....
Nov.	60.00	60.98	64.50	....
Dec.	60.00	64.50	64.50	....
Av.	59.885	60.46	64.50	....

Platinum Averages

N. Y. MONTHLY QUOTATIONS
(Dollars per Troy Ounce)

	1953	1954	1955	1956
Jan.	91.50	91.40	81.00	106.30
Feb.	91.50	91.00	78.16	104.34
Mar.	91.50	87.88	78.00	104.23
Apr.	91.50	85.50	77.94	103.92
May	91.50	85.50	77.50	105.23
June	92.81	85.50	78.33	106.50
July	94.00	85.50	81.78	106.50
Aug.	94.00	85.50	84.59	....
Sept.	92.50	85.50	91.96	....
Oct.	92.50	83.62	94.60	....
Nov.	92.50	81.07	103.11	....
Dec.	92.15	80.64	106.58	....
Av.	92.496	85.72	86.12	....

Prompt Tin Prices

(Straits, Open Market, N. Y.)
Monthly Average Prices
(Cents per pound)

	1953	1954	1955	1956
Jan.	121.50	84.84	87.628	104.768
Feb.	121.50	85.04	90.75	100.586
Mar.	121.415	91.24	91.065	100.524
Apr.	101.07	96.238	91.41	99.145
May	97.387	93.51	91.38	96.853
June	92.933	94.24	93.64	94.488
July	81.826	96.55	96.825	96.131
Aug.	80.69	93.381	96.456	....
Sept.	82.275	93.536	96.256	....
Oct.	80.897	93.00	96.075	....
Nov.	83.26	91.099	97.882	....
Dec.	84.693	88.571	107.75	....
Av.	95.787	91.77	94.73	....

Monthly Tin Production at Longhorn Smelter

(From Concentrates)

(In tons of 2,240 pounds)

	1953	1954	1955	1956
Jan.	4,000	2,700	2,402	1,754
Feb.	3,400	3,008	2,505	1,704
Mar.	3,850	3,559	2,353	1,802
Apr.	3,750	3,006	2,103	1,803
May	3,100	2,054	1,604	2,001
June	3,000	1,205	851	953½
July	3,000	NIL	950	....
Aug.	2,600	2,002	1,749	....
Sept.	2,700	2,404	1,751	....
Oct.	2,751	2,404	1,803	....
Nov.	2,750	2,404	1,803	....
Dec.	2,750	2,404	2,453	....
Total	37,651	27,150	22,327	....

Quicksilver Averages

N. Y. Monthly Averages
Virgin, Dollars per 76-lb. Flask

	1953	1954	1955	1956
Jan.	214.88	189.60	324.68	277.88
Feb.	207.37	190.00	324.68	270.29
Mar.	199.92	201.63	322.61	261.40
Apr.	197.90	221.36	318.14	267.22
May	196.50	251.20	306.62	267.675
June	193.42	273.46	286.98	260.69
July	192.21	287.40	268.22	256.06
Aug.	190.42	290.71	255.18	.....
Sept.	187.04	314.08	263.70	.....
Oct.	184.62	329.50	279.02	.....
Nov.	186.00	321.17	282.50	.....
Dec.	188.38	319.96	282.27	.....
Av.	194.89	265.84	292.90	.....

Primary Aluminum Output, Shipments and Stocks

(U. S. Department of Interior)

	Stocks beginning of month short tons	Production short tons	Sold or Used Short tons	Sold or Used Value f. o. b. plant	Stocks end of month short tons
1955					
March	14,458	130,272	132,760	57,270,040	11,970
April	11,970	126,394	124,415	51,646,568	13,949
May	13,949	131,128	133,025	57,605,872	12,052
June	12,052	127,634	127,056	55,009,348	12,630
July	12,630	132,669	128,961	55,822,814	16,338
August	16,338	133,551	136,472	59,965,645	13,417
September	13,417	130,606	134,125	60,205,054	9,898
October	9,898	134,655	128,116	57,924,207	16,437
November	16,437	133,689	135,953	61,464,364	14,173
December	14,173	140,748	139,901	63,319,738	15,020
1956					
January	15,020	140,394	135,598	$61,362,549	19,816
February	19,816	132,763	135,505	61,284,856	17,074
March	17,074	145,895	143,729	65,043,396	19,240
April	19,240	144,726	149,854	70,479,739	14,112
May	14,112	150,800	153,014	73,940,389	11,898

Aluminum Wrought Products

PRODUCERS' MONTHLY NET SHIPMENTS

(Bureau of Census — Thousands of Pounds)

	Total	Plate, Sheet, & Strip	Rolled Structural Shapes, Rod, Bar & Wire	Extruded Shapes Tube Blooms & Tubing	Powder, Flake, & Paste
1952 Total	1,924,750	1,085,699	443,546	347,542	47,963
1953 Total	2,286,865	1,368,165	422,946	451,922	44,732
1954 Total	2,088,439	1,165,090	357,229	518,070	46,255
1955					
January	206,175	114,040	28,193	54,588	3,465
February	205,198	112,033	26,559	61,920	4,716
March	234,730	128,432	31,051	71,981	3,266
April	227,939	123,293	29,835	72,017	2,794
May	234,309	125,176	30,979	75,371	2,813
June	255,701	136,420	35,306	74,792	3,035
July	210,222	113,305	27,070	62,918	2,379
August	250,036	141,400	29,413	67,904	3,039
September	244,135	134,240	32,973	67,407	2,926
October	248,806	138,328	30,554	71,456	2,926
November	245,256	137,109	31,656	67,798	2,658
December	242,993	138,592	31,802	64,159	1,837
Total	2,805,500	1,542,368	365,391	812,311	35,854
1956					
January	251,772	142,049	34,608	67,499	2,118
February	240,999	134,077	33,727	65,261	1,901
March	232,767	128,432	30,972	63,482	1,947
April	260,610	143,859	37,971	69,639	3,316
May	264,378	147,613	39,900	68,106	2,215
June	240,021	134,510	32,937	65,706	2,119

Aluminum Castings Shipments

(Bureau of Census)

BY TYPE OF CASTING

(Thousands of Pounds)

	Total	Permanent Mold Sand	Permanent Mold Die	All Other
1951 Total	515,131	193,378	160,011	151,465	10,277
1952 Total	518,979	194,616	146,883	169,732	7,748
1953 Total	658,022	214,553	200,025	239,330	4,114
1954					
December	64,054	13,753	23,629	26,017	646
1955					
January	64,414	13,358	23,679	26,819	558
February	66,869	13,579	24,319	28,234	737
March	78,958	16,019	29,029	33,229	682
April	73,049	14,041	28,028	30,208	772
May	71,691	14,235	25,597	31,243	616
June	68,473	14,920	24,682	27,939	932
July	55,033	11,716	21,006	21,656	655
August	64,864	14,916	22,267	27,004	576
September	67,170	14,870	23,075	28,532	693
October	72,197	14,485	25,135	31,741	836
November	75,065	14,327	26,267	33,852	619
December	75,275	15,291	25,031	34,347	606
1955 Total	833,058	171,757	298,115	354,804	8,282
1956					
January	74,152	15,861	24,528	33,253	510
February	73,096	15,560	23,963	32,949	624
March	73,785	16,597	22,816	33,965	407
April	67,880	14,732	20,718	31,782	648
May	65,786	15,570	19,699	29,814	703

Virgin Aluminum

Virgin 99% Delivered Monthly Average Prices

(Cents per pound)

	1953	1954	1955	1956
Jan.	20.173	21.50	22.90	24.40
Feb.	20.50	21.50	23.20	24.40
Mar.	20.50	21.50	23.20	24.60
Apr.	20.50	21.50	23.20	25.90
May	20.50	21.50	23.20	25.90
June	20.50	21.50	23.20	25.90
July	20.962	21.50	23.20	25.90
Aug.	21.50	22.12	24.26	....
Sept.	21.50	22.20	24.40	....
Oct.	21.50	22.20	24.40	....
Nov.	21.50	22.20	24.40	....
Dec.	21.50	22.20	24.40	....
Av.	20.928	21.785	23.655	....

Magnesium Wrought Products Shipments

(Bureau of Census)

(Thousands of Pounds)

	1953	1954	1955	1956
Jan.	1,313	972	1,776	2,118
Feb.	1,601	1,136	1,648	1,901
Mar.	1,601	1,136	1,947	1,946
Apr.	1,708	892	1,756	2,279
May	1,699	1,129	1,836	2,462
June	1,192	1,312	1,686	2,302
July	1,589	1,032	1,437	....
Aug.	1,433	1,111	1,742	....
Sept.	1,254	1,183	2,159	....
Oct.	1,409	1,002	1,667	....
Nov.	1,314	1,243	1,955	....
Dec.	919	1,673	1,577	....
Total	16,885	13,743	21,186	.....

Cadmium Averages

N. Y. Monthly Averages

Cents per lb. in ton lots

	1953	1954	1955	1956
Jan.	193.00	200.00	170.00	170.00
Feb.	200.00	170.00	170.00	170.00
Mar.	200.00	170.00	170.00	170.00
Apr.	200.00	170.00	170.00	170.00
May	200.00	170.00	170.00	170.00
June	200.00	170.00	170.00	170.00
July	200.00	170.00	170.00	170.00
Aug.	200.00	170.00	170.00	.....
Sept.	200.00	170.00	170.00	.....
Oct.	200.00	170.00	170.00	.....
Nov.	200.00	170.00	170.00	.....
Dec.	200.00	170.00	170.00	.....
Av.	199.44	172.50	170.00	.....

Steel Ingot Production

(American Iron and Steel Institute)

Period	Estimated Production — OPEN HEARTH Net tons	Per cent of capacity	BESSEMER Net tons	Per cent of capacity	All Companies ELECTRIC Net tons	Per cent of capacity	TOTAL Net tons	Per cent of capacity	Calculated weekly production, all companies (net tons)
1952 Total	82,846,439	87.2	3,523,677	65.5	6,797,923	82.6	93,168,039	85.8	1,782,097
1953 Total	100,473,823	97.9	3,855,705	83.2	7,280,191	71.1	111,609,719	94.9	2,140,578
1954 Total	80,827,494	73.6	2,548,104	63.2	5,436,054	52.0	88,311,652	71.0	1,693,741
1955									
March	9,060,026	96.7	255,493	62.8	666,235	72.6	9,981,754	93.4	2,253,218
April	8,858,549	97.7	275,069	69.8	681,477	76.6	9,815,095	94.8	2,287,901
May	9,307,291	99.4	305,347	75.1	715,678	77.9	10,328,316	96.6	2,331,448
June	8,764,430	96.6	283,544	72.0	698,493	78.6	9,746,467	94.1	2,271,904
July	8,232,535	88.1	268,348	66.1	600,063	65.5	9,100,946	85.3	2,059,038
August	8,600,612	91.8	298,872	73.5	694,961	75.7	9,594,545	89.7	2,165,812
September	8,829,266	97.6	307,171	78.2	745,888	84.1	9,882,325	95.7	2,308,954
October	9,369,704	100.0	330,150	81.2	801,196	87.3	10,501,050	98.2	2,370,440
November	9,141,244	100.8	306,674	77.9	799,480	89.9	10,247,398	99.0	2,388,671
December	9,390,000	100.5	292,000	72.0	786,000	85.8	10,468,000	98.1	2,368,000
Total	105,342,886	95.6	3,319,088	69.3	8,338,592	77.2	117,000,566	93.0	2,243,969
1956									
January	9,676,151	101.4	323,235	79.5	828,845	86.6	10,828,231	99.3	2,444,296
February	9,043,064	101.3	296,543	78.0	779,388	87.1	10,118,995	99.2	2,444,202
March	9,795,263	102.7	310,060	76.3	819,465	85.7	10,924,788	100.2	2,466,092
April	9,437,945	102.2	306,388	77.9	779,455	84.2	10,523,785	99.7	2,455,097
May	9,370,167	98.2	297,990	73.3	822,219	86.0	10,490,376	96.2	2,368,034
June	8,698,000	94.2	283,000	71.9	777,000	84.0	9,758,000	92.5	2,275,000
July	1,324,000	13.9	.....	...	286,000	29.9	1,610,000	14.8	364,000

Blast Furnace Output

(American Iron and Steel Institute)

	Pig Iron	Ferro-manganese & Spiegel	Total	% Capacity
	net tons			
1947				
Ttl. Yr.	58,507,169	702,561	59,209,730	90.1
1948				
Ttl. Yr.	60,135,941	712,899	60,848,840	90.2
1949				
Ttl. Yr.	53,613,779	592,564	54,206,343	76.3
1950				
Ttl. Yr.	64,810,272	673,896	65,484,168	91.5
1951				
Ttl. Yr.	70,487,380	745,381	71,232,761	98.3
1952				
Ttl. Yr.	61,528,665	629,926	62,158,591	84.2
1953				
Total	74,987,721	855,038	75,842,759	95.5
1954				
Mar.	4,907,147	52,156	4,959,303	71.2
Apr.	4,449,289	53,277	4,502,566	66.7
May	4,572,252	52,187	4,624,439	66.4
June	4,683,629	40,521	4,724,150	70.0
July	4,590,076	36,108	4,626,184	66.6
Aug.	4,629,291	37,744	4,667,035	71.0
Sept.	4,417,888	43,934	4,461,822	66.3
Oct.	4,937,436	46,244	4,983,680	71.5
Nov.	5,204,446	52,454	5,256,900	77.9
Dec.	5,526,720	59,793	5,586,513	80.4
Total	58,119,382	568,735	58,688,117	71.6
1955				
Jan.	5,729,404	55,249	5,784,653	81.1
Feb.	5,384,585	48,182	5,442,767	84.5
Mar.	6,406,902	57,049	6,463,951	90.6
Apr.	6,329,927	54,712	6,384,639	92.4
May	6,763,236	51,699	6,804,935	95.4
June	6,495,050	48,735	6,543,878	94.7
July	6,329,393	61,166	6,390,559	89.8
Aug.	6,629,580	71,902	6,601,482	92.5
Sept.	6,653,578	49,788	6,703,366	97.3
Oct.	6,905,280	59,993	6,965,273	97.6
Nov.	6,636,649	62,341	6,698,990	97.0
Dec.	6,887,667	65,849	6,953,516	97.7
Total	77,114,073	868,758	77,800,831	92.7
1956				
Jan.	6,985,945	63,619	7,049,564	97.1
Feb.	6,539,199	63,618	6,602,817	97.2
Mar.	7,083,877	65,566	7,149,443	98.5
Apr.	6,860,833	63,760	6,924,563	98.6
May	6,873,102	47,840	6,920,942	95.3
June	6,387,608	46,981	6,434,589	91.6

Steel Castings Shipments

(Bureau of Census)

	(Short Tons) Total	For Sale	For Own Use
1950	1,461,667	929,192	374,217
1951	2,101,604	1,507,413	594,191
1952	1,925,116	1,476,352	448,767
1953	1,829,277	1,290,016	431,330
1954			
Feb.	116,520	88,699	27,821
Mar.	122,310	92,271	30,039
Apr.	105,788	78,754	27,034
May	94,610	70,596	24,014
June	100,022	72,881	27,141
July	75,848	53,207	22,641
Aug.	89,590	66,792	22,798
Sept.	88,359	64,722	23,637
Oct.	87,085	64,004	23,081
Nov.	87,659	64,812	22,847
Dec.	93,547	69,843	23,704
Total	1,184,096	880,158	303,938
1955			
Jan.	98,238	75,044	23,194
Feb.	106,430	80,729	25,701
Mar.	127,460	98,926	28,534
Apr.	120,053	92,237	27,816
May	122,465	92,713	29,752
June	133,887	102,457	31,430
July	97,875	71,170	26,705
Aug.	126,406	96,290	30,116
Sept.	140,843	107,622	33,221
Oct.	145,674	110,409	35,265
Nov.	152,381	116,908	35,473
Dec.	158,982	122,201	36,781
Total	1,530,694	1,166,706	363,988
1956			
Jan.	158,618	123,343	35,275
Feb.	165,398	128,598	36,800
Mar.	170,045	130,839	39,206
Apr.	163,708	125,015	38,693
May	122,465	92,713	29,752

GALVANIZED SHEET SHIPMENTS

(American Iron & Steel Institute)

(Net Tons)

	1953	1954	1955	1956
Jan.	201,472	169,086	211,101	269,464
Feb.	183,503	167,433	199,408	272,997
Mar.	204,995	180,198	238,649	291,193
Apr.	196,656	203,312	239,001	266,728
May	189,765	201,671	235,962	272,741
June	184,862	200,456	246,940	.....
July	185,896	214,349	205,211	.....
Aug.	187,741	207,113	241,863	.....
Sept.	194,257	209,765	269,020	.....
Oct.	208,705	209,498	260,010	.....
Nov.	177,391	195,190	255,692	.....
Dec.	175,375	205,561	261,640	.....
Total	2,290,868	2,362,632	2,864,497	.....

SHIPMENTS of TIN-TERNE PLATE

(American Iron & Steel Institute)

(Net Tons)

	Hot Dipped 1955	Hot Dipped 1956	Electrolytic 1955	Electrolytic 1956
Jan.	82,874	81,034	335,682	402,627
Feb.	88,189	77,877	344,467	404,193
Mar.	94,434	133,257	419,574	598,129
Apr.	89,492	138,556	441,194	654,575
May	125,579	70,282	481,805	354,204
June	130,603	.....	520,305	.....
July	76,473	.....	291,405	.....
Aug.	111,482	.....	441,201	.....
Sept.	116,295	.....	471,624	.....
Oct.	60,355	.....	249,790	.....
Nov.	59,269	.....	240,503	.....
Dec.	65,363	.....	263,087	.....
Total	1,100,762	.....	4,503,637	.....

Steel Ingot Operations

(Percentage of Capacity as Reported by American Iron & Steel Institute)

Week Beginning	1953	1954	1955	1956
Jan. 2	98.2	75.4	81.2	97.6
Jan. 9	99.3	74.3	83.2	98.6
Jan. 16	99.7	74.1	83.2	99.0
Jan. 23	99.4	75.6	85.0	100.4
Jan. 30	97.7	74.4	85.4	99.3
Feb. 6	99.7	74,4	86.8	99.1
Feb. 13	99.1	74.6	89.1	98.8
Feb. 20	99.4	73.6	90.8	98.8
Feb. 27	100.3	70.7	91.9	99.9
Mar. 5	101.3	69.3	92.9	100.0
Mar. 12	101.5	67.6	94.2	100.6
Mar. 19	103.1	68.1	93.7	99.5
Mar. 26	97.1	69.1	94.4	99.6
Apr. 2	98.9	68.0	95.3	97.7
Apr. 9	98.8	68.0	94.6	100.9
Apr. 16	101.0	68.6	94.6	100.2
Apr. 23	100.3	68.7	95.6	100.5
Apr. 30	100.2	69.4	96.6	96.4
May 7	100.3	70.9	97.2	95.2
May 14	99.8	71.8	96.9	95.3
May 21	100.3	71.2	96.4	97.3
May 28	99.6	70.2	95.8	96.3
June 4	97.9	73.2	94.7	96.7
June 11	96.8	72.3	96.0	93.4
June 18	96.8	72.1	95.0	93.0
June 25	91.8	65.8	71.1	84.9
July 2	92.8	60.0	85.9	12.3
July 9	94.7	64.3	91.2	12.9
July 16	94.4	65.3	91.0	14.6
July 23	92.6	64.2	90.7	17.0
July 30	94.0	64.0	86.9	16.9
Aug. 6	95.2	64.0	89.4	57.5
Aug. 13	95.9	61.8	90.2	85.5
Aug. 20	93.4	63.5	90.6	...
Aug. 27	90.5	64.0	93.4	...
Sept. 3	89.2	63.0	93.8	...
Sept. 10	91.4	66.3	95.7	...
Sept. 17	95.1	68.7	96.1	...
Sept. 24	95.3	70.4	97.0	...
Oct. 1	95.2	71.0	96.7	...
Oct. 8	96.3	72.8	96.5	...
Oct. 15	95.0	73.6	98.9	...
Oct. 22	94.6	74.5	100.0	...
Oct. 29	93.0	76.4	99.4	...
Nov. 5	92.3	77.2	99.6	...
Nov. 12	90.7	79.3	99.2	...
Nov. 19	86.8	80.3	100.1	...
Nov. 26	87.5	81.4	97.6	...
Dec. 3	86.7	82.5	100.1	...
Dec. 10	84.3	81.5	100.3	...
Dec. 17	64.1	72.4	96.9	...
Dec. 24	75.7	77.6	95.7	...
Dec. 31	...	...	...	...

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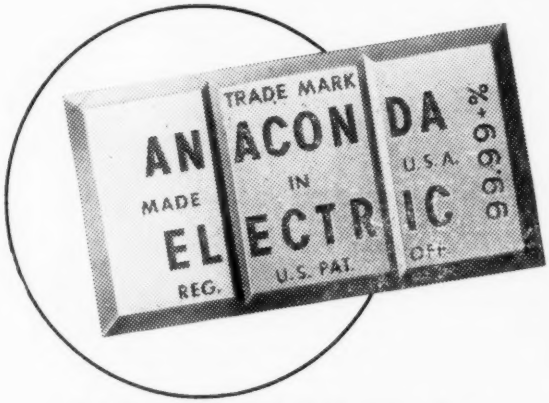

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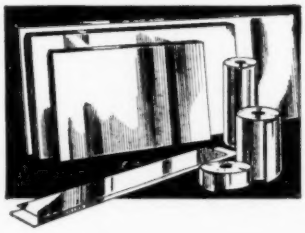

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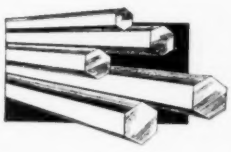

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